THE COMMODIFICATION OF PATENTS 1600–1836:

HOW PATENTS BECAME RIGHTS AND WHY WE SHOULD CARE

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It has become fashionable to speak of the "commodification of information."[1] Although this trend is by no means limited to intellectual property scholars, it is, unsurprisingly, especially prevalent among them. Recent developments in intellectual property law, we are often told, have led to a dramatic increase in the commodification of intellectual goods. Treatment of the subcategory of patents commonly follows the same pattern. It is argued that the subject matter of patent, be it scientific research or other innovative information, is undergoing a process of commodification.[2]

But what exactly does this mean? Commodification is a complex term with a long etymology, which I will not explore here. As befits such a complex term, it has multiple meanings that are not always consistent with each other.[3] Still, I think that when contemporary intellectual property scholars employ the term, they usually do it to roughly communicate the same idea: that being commodified means being transferable, or being a potential object of a commercial transaction in the market. When something (e.g., a human kidney or a method of doing business) changes its legal or social status from being non-transferable in commercial exchange to

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1. *See* THE COMMODIFICATION OF INFORMATION (Niva Elkin-Koren & Neil Weinstock. Netanel eds., 2002).

2. Neil W. Netanel & Niva Elkin-Koren, *Introduction: The Commodification of Information*, *in id.* at vii, viii.

3. *See* Eli Noam, *Two Cheers for the Commodification of Information*, *in* THE COMMODIFICATION OF INFORMATION, *supra* note 1, at 43. 46–47.

being an object of market transaction, we say it has been commodified.

If this is the relevant meaning of the term, one may wonder what all the commodification buzz is about.[4] After all, not only various kinds of information, but also entitlements in information have been subject to commercial exchange under the sanction of the law for centuries. Sixteenth century English stationers regularly sold, and even mortgaged, the "copyrights" in "their books."[5] Royal patent grants of the seventeenth century routinely confirmed that the entitlements they created applied to assignees.[6] Is there anything new, then, about the commodification of information?

One answer is that the scope and scale of commodification are new. Due to the remarkable ongoing expansion of the subject matter covered by various intellectual property rights,[7] much larger quantities of information are being subjected to commercial exchange in the market. The growing duration of some intellectual property rights means that it retains this status longer. I do not wish to deny that the expansion of subject matter and the extension of the duration of intellectual property rights are important dimensions of recent developments, but I think that this answer is incomplete. Taken in isolation, it is over-essentialist. It implicitly assumes a static and one-dimensional model of commodification (as market transferability) and simply argues that an increasing relative share of informational goods is subjected to it. What is missing in this picture is that the development of intellectual property rights involved not

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4. *Id.* at 50.

5. *See* John Feather, *From Rights in Copies to Copyright: The Recognition of Authors' Rights in English Law and Practice in the Sixteenth and Seventeenth Centuries*, *in* THE CONSTRUCTION OF AUTHORSHIP TEXTUAL APPROPRIATION IN LAW AND LITERATURE 191, 197 (Martha Woodmansee & Peter Jaszi eds., 1994); *see also* LYMAN RAY PATTERSON, COPYRIGHT IN HISTORICAL PERSPECTIVE 54–59, 71–73 (1968).

6. Little is known about the actual market practices of early English patents. However, the common phrasing of patent grants conferred the privileges granted on the patentee's assignees. Feather, *supra* note 5, at 197; *see also*, BRUCE W. BUGBEE, THE GENESIS OF AMERICAN PATENT AND COPYRIGHT LAW 31–33 (1967) (discussing English patent policy).

7. *See* William W. Fisher III, *The Growth of Intellectual Property: A History of the Ownership of Ideas in the United States*, 1–10, *at* http://cyber.law.harvard.edu/people/tfisher/iphistory.pdf (last visited Sept. 20, 2004).

just more commodification, but also the transformation and construction of a particular model of commodification.

A good starting point for explaining my argument is a short description from someone who is perhaps currently the most influential scholar on the subject.[8] "The touchstone of commodification," writes Margaret Radin, "is the organized activity of exchange, supported by the legal infrastructure of private-property-plus-free-contract."[9] One may read this as simply a statement of the commodification as transferability in the market model. Then again, institutional economics has taught us that there is no such thing as *the* market, and legal realism has taught us that there is no such thing as *the* legal infrastructure of private-property-plus-free-contract. Put differently, the market is an amalgam of particular social institutions that construct, channel, and shape the commercial exchange interaction in a certain society.[10] In various societies, one can find different variants and mixes of those institutions. The legal infrastructure, and particularly the property and contract portion of it, is usually the most important parts of the institutional details[11] that constitute a particular market. Here, too, though, one cannot find an essential model of institutional arrangements. Property and contract law consist of endless choices and combinations. Each particular mix constructs a particular market. None of those markets is more *the* market than the actual and possible others.

The same insight applies to commodification. Defining commodification as the state of being an object of exchange in the

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8. *See, e.g.*, MARGARET JANE RADIN, CONTESTED COMMODITIES (1996).

9. Margaret J. Radin, *Incomplete Commodification in the Computerized World*, *in* THE COMMODIFICATION OF INFORMATION, *supra* note 1, at 3–4.

10. On institutional economics, see James M. Acheson, *Welcome to Nobel Country: A Review of Institutional Economics*, *in* ANTHROPOLOGY AND INSTITUTIONAL ECONOMICS 3 (James M. Acheson ed., 1994). On the interaction of institutional economics and legal history, see Ron Harris, *The Encounters of Economic History and Legal History*, 21 LAW & HIST. REV. 297 (2003).

11. Throughout this text I use the terms "institutions" and "institutional" in the broad sense characteristic of institutional economics. In this usage the terms are not limited to social, political, or administrative organizations (such as courts or legislatures); rather, they encompass all social, legal and administrative norms and practices. For a critical view of this comprehensive indiscriminating usage, see Acheson, *supra* note 10, at 25.

market supported by the legal infrastructure of property and contract begs the question: what market? Hence, the interesting question becomes not so much *how much* commodification, but *what kind* of commodification. In other words, it becomes just as important to explore the structure and the development of the particular framework of the market within which something becomes a commodity. In the field of information, intellectual property law forms the lion share of the property and contract infrastructure that creates the matrix of a specific market. Hence the conceptual and institutional structure of intellectual property rights is the key for understanding the commodification of information.

When one looks at the history of intellectual property from this perspective, the illusion of inertness disappears. Seventeenth century copyrights and patents allowed the transferability of information in the market and were themselves transferable.[12] These complex social-legal constructs were very different from the ones familiar to us today, however. Hence, the market they constituted was very different. There is an important story to tell here about the development and transformation of intellectual property rights into their modern form. It tells us that the commodification of information is not merely the spread of one constant model of market transferability of intangibles, but rather the gradual construction and mutation of a particular institutional model.

The purpose of this essay is to explore in detail the development within the Anglo-American legal tradition of one aspect of the institutional model that defines and shapes entitlements in patent law, and market exchange of the sort of resources and goods governed by patent law. I do not provide here a complete account of the development of English and American patent law or systems. Nor do I explore the history of all the central aspects of the Anglo-American institutional model of patents. Rather, I intend this essay to be a focused, two and one half centuries deep, longitudinal cut into only one of the key components of this model. Its focus is on the character of the entitlements created by patent law and the development of the modern conception of patents as rights.

The general trajectory of the development of patents in this respect went from privileges to rights. The social meaning and legal

12. *See* Feather, *supra* note 5, at 197.

infrastructure of patents transformed gradually, but dramatically, along this axis during the period covered. Patents changed from case-specific discretionary policy or political grants of special privileges designed to achieve individually defined public purposes, to general standardized legal rights conferring a uniform set of entitlements whenever predefined criteria are fulfilled.

This Article tracks this aspect of the institutional development of patents from their early origins in late sixteenth century England, through the mid-nineteenth century in the United States. Part I briefly explains what I perceive to be the modern institutional model of patent rights. In Part II, I explore the development of patents in England, as well as that of the early American patent grant practices in the American colonies and the States. I argue that while patents had undergone significant changes throughout a period of two-hundred years, by the time of the inception of the American federal regime, the institutional model of patents was still quite different from the modern one. Part III describes the emergence of this modern model of patent rights in the United States during the first half of the nineteenth century. The historical process of institutional and conceptual change, which I describe, had produced the peculiar model of owning and commercializing information in the market that we usually take for granted today. The essay concludes with a preliminary discussion of some of the possible current implications of the historical development of patents and of the modern framework of patent rights that this process produced.

I. PATENT RIGHTS

Modern patents are legal rights. This commonsensical assertion represents a rather complex set of institutional arrangements. Let me start by briefly stating the main components of this institutional model. First of all, patents are part of a general legal regime.[13] That is to say, patent entitlements, as well as related norms and procedures, are created and defined by law—mostly statutory law—of general applicability. For example, if P receives a patent in the United States, it is not because some agency of the executive branch decided that it constituted good policy to create P's patent. Nor is it because Congress legislated a specific law that created P's patent,

13. *See* P.J. Federico, *State Patents*, 13 J. PAT. OFF. SOC'Y 166, 166 (1931).

although Congress has the power to legislate such a law. Rather, P receives a patent because the general patent regime defined by law mandates that whenever a set of substantive and procedural conditions arise, a patent must be issued.

As apparent from the description above, the general legal regime defines standard patentability criteria. It defines, in general uniform terms, the kinds of persons that may receive a patent, the possible subject matter of patents, the substantive conditions that must occur for a valid patent to be issued, and the procedures that must be followed.[14] Whenever those patentability criteria are fulfilled, the relevant person is entitled to a patent.[15] That is to say, she has a right to receive a standard set of exclusive entitlements vis-à-vis the patented invention. These entitlements are enforceable against others in legal proceedings in the courts.[16]

A crucial element here is that whenever the general patentability criteria are met, patentees have a right to their standard set of entitlements. The state agency in charge of issuing patents—in the United States the Patent and Trademark Office—has a correlative duty to issue a patent whenever those standard criteria are met, and the courts have a duty to enforce the patent entitlements if infringed. If the state agency fails to issue a patent, because it thinks that the criteria were not met or for any other reason, the would-be patentee may "demand" a patent. The patentee can turn to a designated supervising authority and ultimately to a court. The role of the court is to interpret and apply, and sometime to judicially legislate, the general patentability criteria. In a case in which the authoritative application of the uniform patentability norms is in favor of the would-be patentee, the court would order and enforce the issuance of a patent and the issuing agency would have a duty to issue.

I will call the combination of elements described above "the patent-rights model." Later in this essay I will discuss some of the implications of this institutional model. At the moment, however, let us turn to its history within the Anglo-American legal tradition. This history begins in late sixteenth century England with a set of administrative practices called "letters patent" that did not have any

14. *See id.*
15. *See, e.g.*, BUGBEE, *supra* note 6, at 143–44.
16. *Id.*

of the characteristics described above as the crucial elements of the patent-rights model.[17]

II. ENGLISH AND COLONIAL ORIGINS OF AMERICAN PATENT LAW

A. English Patents

1. The Early Patent Grant

In order to understand early English patents for invention, modern observers must forget everything they know about patents. Early Anglo-American patents were entirely different creatures from the ones familiar to the modern observer. The administrative practices that eventually developed into what we call patents were individual governmental monopoly grants that first appeared in a few Italian republics in the fifteenth century.[18] Although there were prior antecedents in England,[19] the rise of the extensive and systematic use of invention patent grants occurred there during the late sixteenth century[20] under the reign of Elizabeth I.[21]

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17. The word patent is derived from the Latin verb *patere*, which means to be open. WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE: UNABRIDGED 1654 (Philip Babcock Gove et al. eds 1986).

18. For early origins of patents in Europe, see BUGBEE, *supra* note 6, at 12–27; see also Ramon A. Klitzke, *Historical Background of the English Patent Law*, 41. J. PAT. OFF. SOC'Y 615, 616–21 (1959); Giulio Mandich, *Venetian Origins of Inventors' Rights*, 42 J. PAT. OFF. SOC'Y 378 (1960); Frank D. Prager, *A History of Intellectual Property from 1545 to 1787*, 26 J. PAT. OFF. SOC'Y 711 (1944); Edward C. Walterscheid, *The Early Evolution of the United States Patent Law: Antecedents* (pt. 1), 76 J. PAT. OFF. SOC'Y 697, 699–715 (1994).

19. The earliest English patent known is probably the 1331 grant by Edward III to John Kempe for cloth making. For a survey of early grants, see E. W. Hulme, *The History of the Patent System Under the Prerogative and at Common Law,* 12 LAW Q. REV. 141, 141–44 (1896). Those early grants, however, were "letters of protection." Klitzke, *supra* note 18, at 623. They lacked any element of privilege of exclusivity or a monopoly bestowed on the grantee. These letters of protection provided the "king's protection" to foreigners and a license to practice their trade in spite of guild and other similar limitations and restrictions. *Id.* at 623–24 (comparing the letters of protection to passports).

20. Historians disagree over which was the first "genuine" patent for invention in England. *See* MOUREEN COULTER, PROPERTY IN IDEAS: THE

The very employment of the term "patents for inventions" in the context of this early period is an anachronism. Patents for invention simply did not exist as a clearly differentiated category in this time's discourse or practice. Monopoly privilege grants to "inventors"—another anachronism[22]—were part of a much larger group of royal grants of various kinds made by "letter *patents*," or *litterae patentes*.[23] The term literally referred to the official document used in such grants: an open letter addressed to the public[24] that announced the privileges conferred by the king upon a specific grantee.[25] As a derivable usage, it came to signify the entire administrative channel for conducting official business and exercising the royal prerogative. Blackstone's much later and often cited reference to patents captured this understanding.[26] In the *Commentaries,* he spoke of "grants, whether of lands, honours, liberties, franchises, or ought besides, [that] are contained in charters,

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PATENT QUESTION IN MID-VICTORIAN BRITAIN (1990). The debate about which was the first "genuine" patent for invention is somewhat anachronistic and counterproductive. The arguments revolve around the question of which patent was granted for a "genuine" invention in the modern sense. This focus tends to obscure the most significant fact, which is that the modern concept of invention did not exist and that patents for invention were not conceived as a separate category.

21. Those grants were part of a policy for the encouragement of industry by Elizabeth's first Secretary of State, William Cecil (Lord Burleigh). During the reign of Elizabeth I there were fifty-five patents for inventions issued. Twenty-one of them were issued to non-English subjects. E. W. Hulme, *The History of the Patent System Under the Prerogative and at Common Law: A Sequel*, 16 LAW Q. REV. 44, 52 (1900).

22. Another important respect in which early patents differed from modern ones is the concept of invention underlying them. The focus of early invention patents was neither on information nor on technological innovation. Rather, at the focal meaning of invention was the exercise in practice of a new economic "trade" or "art." Edward C. Walterscheid, *The Early Evolution of the United States Patent Law: Antecedents* (pt. 2.), 76 J. PAT. OFF. SOC'Y 849, 857 (1994); *see also* D. Seaborne Davies, *The Early History of the Patent Specification* (pt. 1), 50 LAW Q. REV. 86, 95–96 (1934). The history of this aspect of the development of patents is beyond the scope of this essay.

23. 2 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND, 346 (Oxford, Clarendon Press 1766); *see also* COULTER, *supra* note 20, at 7.

24. Letter patents stood in contrast to *litterae clausae*, sealed closed documents that did not become public records. Walterscheid, *supra* note 18, at 700–01.

25. *Id.*

26. 2 BLACKSTONE, *supra* note 23, at 346.

or letters patent that is, open letters, [literae patentees]: so called because they are not sealed up, but exposed to open view, with the great seal pendant at the bottom; and are usually directed or addressed by the king to all his subjects at large."[27] Patents for invention were yet another brand of those grants and were not usually thought of as constituting a special category.

The early patent grant had none of the elements of the patent-rights model. The grant practices created a fundamentally different institutional model, which I shall here call "patent-privileges." To begin with, patents for invention were not governed by a general legal regime. In this early period no such thing as a "patent system" existed in England. Moreover, there was no patent law, in the sense of a coherent and comprehensive corpus of legal doctrines that defined and governed the practice of patents for invention.[28] The conceptual-institutional scheme of early invention patents was latent in, and must be reconstructed from, the actual grant practices, such as the bureaucratic procedures involved or the typical content of patent grants.[29]

A patent was a creature of royal prerogative. It was based on case-specific policy decisions of the monarch to confer particular privileges on a certain individual in order to promote some economic, social, or political goal.[30] Since patent grants were discretionary "deals," there were no general patentability criteria for receiving a patent or for insuring the issuance of one.[31] Moreover, even when a patent was granted, the privileges it created were not standard.[32] Each grant created its own tailored set of mutual "considerations," namely, the public benefits a patentee was

27. *Id.*

28. Scattered common law cases started to appear at the beginning of the seventeenth century. *See infra* note 75. However, even those early cases, despite their later importance, did not come close to creating anything that could be called "patent law."

29. CHRISTINE MACLEOD, INVENTING THE INDUSTRIAL REVOLUTION, THE ENGLISH PATENT SYSTEM, 1660–1800, at 2 (1988).

30. *See* George Ramsey, *The Historical Background of Patents*, 18 J. PAT. OFF. SOC'Y 6, 6–9 (1936).

31. *See* MACLEOD, *supra* note 29, at 2–3.

32. Davies, *supra* note 22, at 97.

expected to supply and the privileges that the patentee received in return.[33]

In this framework, a patent was by no means a right in the modern sense of the term. The idea of anyone having a right to a patent, upon the fulfillment of a few standard requirements and of a corresponding duty to issue, stood in sharp contrast to the grant system's *raison d'être*.[34] The grant was a tool for dispensing royal policy and was based on royal discretion. The king granted all patents as "a matter of grace and favour."[35] This meant that though some general policy may have applied with regard to a certain class of cases, each grant was an independent decision based on the exercise of specific discretion and a weighing of the interests involved. No matter how novel or ingenious a specific invention was, no one could claim a right to be granted royal privileges in the form of a patent. Similarly, no institution—court or otherwise—could declare and enforce a "duty" of the crown to issue a patent.[36] Instead, it was always a matter of royal prerogative and discretion to bestow such a privilege as a specific policy response to a specific plea.[37]

This patent-privileges framework was embedded in various administrative practices. Patent petitions and the patent grants themselves opened with recitals of the specific benefits that the patentee offered to the realm and the crown.[38]

In later times, these recitals gradually fossilized into a mere formality, but in the early patent practice they were quite viable and served a genuine function. The descriptions in the recitals were not general assertions of utility, but rather accounts of the specific and tangible benefits offered. These benefits might have included decreasing unemployment, providing relief to a "decayed town," or supplying a needed commodity superior in price or quality to

33. *Id.*

34. *See* EDWARD C. WALTERSCHEID, TO PROMOTE THE PROGRESS OF USEFUL ARTS: THE AMERICAN PATENT LAW AND ADMINISTRATION, 1798–1836, at 38 n.50.

35. This term became a common description of patents when the earliest legal treatises started to appear at the beginning of the nineteenth century. *See infra* text accompanying notes 182–183.

36. *See* Hulme, *supra* note 19, at 151.

37. *See* Walterscheid, *supra* note 22, at 863.

38. Davies, *supra* note 22, at 98.

imported ones. They might have included strengthening the defense of the realm, increasing the numbers of certain essential workers such as mariners or miners, or establishing an export trade.[39] Dudley's 1622 ironworks patent, for example, explained that the new method,

> will not only in itself tend to the public good thereof, but also thereby the great expense and waste of timber and wood converted into charcoal and consumed upon iron works will be much abated, and the remnant of wood and timber within this land will be much preserved and increased; of the want whereof not only ourself, in respect of provision for our shipping and otherwise, but also our subjects, for many necessary uses, are very sensible.[40]

The recitations of utility and the "consideration" promised by patentees were by no means only ceremonial. Early patents were not granted on demand. They involved real discretion and consideration on the part of the crown as to the benefits involved and the possible effects on various interests.[41] There is no need to idealize the picture and assume that the crown always considered the public good rather than narrow political and personal interests and goals. Patent grants were neither immune from criticism nor always regarded as justifiable by contemporaries. Yet both the grant decisions and attacks on such decisions occurred within the privilege framework.[42]

On the other side of the equation were the privileges granted to the patentee. These, too, were crafted in a particularistic, case-specific manner. On some general level, all invention patent privileges were the same; in that they all granted exclusivity in the exercise of some trade or economic activity for a limited period. On a more specific level, however, the privileges varied greatly.[43] For

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39. E. W. Hulme, *On the Consideration of the Patent Grant, Past and Present,* 13 LAW Q. REV. 313, 315 (1897). For a survey of the changing character of the social benefits promised by patentees from the middle of the seventeenth century to the end of the eighteenth century, see also MACLEOD, *supra* note 29, at 158–81.

40. The patent is reproduced in THOMAS WEBSTER, REPORTS AND NOTES OF CASES ON LETTERS PATENT FOR INVENTIONS 14 (London, Thomas Blenkarn 1844).

41. *See* MACLEOD, *supra* note 29, at 12.

42. See *infra* text accompanying notes 170–183.

43. Hulme, *supra* note 21, at 44–51.

example, the exact economic activity in which the patentee had exclusivity was specifically defined in each grant.[44] Sometimes there were geographical limitations to the privileges that covered only certain parts of England.[45] At other times, the privileges included exemptions from guild or other restrictions and conferred unique powers, such as the right to take professional workers of a certain kind for reasonable wages.[46] Other patents included the right to enter some private properties.[47] All invention patent privileges were limited in time, but the duration varied widely.[48] A 1571 grant for making "Turkye haftes," for example, had a term of six years,[49] while a 1577 grant for "making sulphur, brimstone, and oils" had a term of thirty.[50]

Many sixteenth and seventeenth century English patents had "working clauses."[51] A working clause obliged the patentee to put the invention into practice, usually within a prescribed period.[52] The sanction for non-compliance was "avoidance," or nullification of the patent.[53] Moreover, patents with working clauses often required the patentee to produce goods of a certain quality and sell them within certain price limits.[54] A typical example is George Gyplin and Peter Stoughberken's 1563 ten-year patent to make ovens and furnaces, which stipulated that the grant would be void if the patentees failed

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44. *Id.*

45. *E.g., id.* at 45 (discussing a 1571 grant to Rd. Dyer for the making of "earthen pots to hold fire for seething meat" that covered "London and a three-mile radius"); *id.* at 48 (discussing a 1585 grant for the making of white salt was confined to Lyn, Regis and Boston).

46. The 1564 patent to Cornelius de Vos for the making of alum and copper, for example, conferred the right "to take up workmen at reasonable wages, together with all materials requisite for the manufacture." Hulme, *supra* note 19, at 146–47. A 1565 patent for the making of Spanish leather exempted the patentees from a law prohibiting the export of leather. *Id.* at 147.

47. For example, a 1562 patent to John Medley for mine drainage included clauses "regulating the compensation to be paid for entering upon abandoned properties." *Id.* at 146.

48. Hulme, *supra* note 21, at 44–51; *see also* Hulme, *supra* note 19, at 145–50.

49. Hulme, *supra* note 21, at 45.

50. *Id.* at 47.

51. Hulme, *supra* note 19, at 143.

52. Davies, *supra* note 22, at 100.

53. *Id.* at 101.

54. *Id.* at 105.

to put the grant into practice within two months, or prove extortionate in their charges.[55] One of the versions of the Smalt patent required its patentee "to make sufficient quantity of the said smalt to serve for the use of this our kingdom, and to serve the same with smalt as good and as cheap as the like brought from beyond the seas, within the space of seven years."[56]

Some early patent grants were dependent on actual quality inspection by official representatives, either ex-ante as a demonstration that the alleged invention actually delivered the promised results,[57] or ex-post as an ongoing regulation.[58]

Another brand of patent clauses known as revocation clauses gradually became widespread and supplanted working clauses.[59] The first clause of this kind was introduced in a 1575 patent to Holmes and Frampton.[60] By the second half of the seventeenth century, revocation clauses "became a fixed feature of all patents of invention and remained as such down to modern times."[61] A revocation clause was a general escape clause. It usually stated that the crown or its arm, the Privy Council, had the power to revoke a patent upon proof that it was "inconvenient or prejudicial to the realm."[62] This term covered issues like novelty and priority of

55. Hulme, *supra* note 19, at 146.

56. WEBSTER, *supra* note 40, at 11. Smalt is described in an earlier version of the patent as "a certain blue stuff . . . commonly used by painters and limners." *Id.* at 9.

57. Hulme, *supra* note 19, at 145. A 1561 grant for making "white sope" mandated that "the soap, which is to be of the white hard variety, shall be as good and fine as is made in the *Sope house of Triana or Syvile*." *Id.* The patentees were bound to submit their wares for the inspection of the municipal authorities. *Id.*

58. *Id.* at 146 (describing a 1562 patent with regulation clauses).

59. Davies, *supra* note 22, at 102.

60. *Id.* at 102 n.60.

61. *Id.* at 103. According to one author, revocation clauses authorizing the Privy Council to revoke patents were inserted in the patent grants until 1902. *See id.*; WILLIAM MARTIN, THE ENGLISH PATENT SYSTEM 16 (1904) (discussing the Patent Act of 1902, which gave the Privy Council statutory revocation power).

62. Davies, *supra* note 22, at 102–03. For the exact phrasing of the clause, see also 11 WILLIAM HOLDSWORTH, A HISTORY OF ENGLISH LAW 426 n.6 (1924).

invention.[63] Yet it also included "any failure to introduce an invention within a reasonable period"[64] and many other specific "abuses." Hence, the inconveniency ground for revocation was often the basis for a substantive and comprehensive policy assessment of particular patent grants.[65]

The records of the Privy Council provide many examples of discussions of a patent's inconvenience, either prior to the grant or at a later time as part of a revocation process.[66] Traswell's patent for a mill to grind corn and drain mines, for example, was challenged in 1660 because Traswell allegedly was not the real inventor, and because he was granted a patent that "he did not thoroughly understand, or could put into practise."[67] Likewise, Rersby and Strickland's patent for steel making was attacked in 1665 because "neither of the patentees had any experience in the art, or had ever publicly exercised the same."[68] Another example is Garill's patent application for his method of casting gold and silver ingots. Critics argued that it "will be hurtful to trade, and deprive many hundreds of their Labour and lyvelyhood," and "will minister great occasion of counterfeyting of moneys and so become a publique Mischief."[69]

In short, Privy Council proceedings were a public forum that assessed the policy considerations behind specific patents. The review of patents was not limited to interpreting and applying a standard set of patentability criteria, but rather extended to a process of public deliberation of the interests, policies, and social costs and benefits underlying specific grants. The line between an unlawful patent that did not meet a general patentability requirement and an

63. For the emergence of these requirements for the validity of a patent see *infra* discussion accompanying notes 111–112 and 118; see also Davies, *supra* note 22, at 103–04.

64. Davies, *supra* note 22, at 102.

65. Holdsworth explains that in such proceedings, the Council decided such questions as, which claimant was the first inventor, whether the invention was really new, and whether it was in the public interest to grant a patent. HOLDSWORTH, *supra* note 62, at 426 n.6; *see also* Davies, *supra* note 22, at 103–04 (stating other grounds on which the Council might revoke a patent).

66. Hulme, *supra* note 39, at 313–15.

67. E. Wyndham Hulme, *Privy Council Law and Practice of Letters Patent for Invention from the Restoration to 1794* (pt. 1), 33 LAW Q. REV. 63, 63–64 (1917).

68. *Id.* at 68.

69. *Id.* at 67.

inconvenient patent that simply embodied bad public policy, to the extent it existed, was extremely blurry.[70]

All of those institutional practices combined to produce the "patent deal." The patent was conceived as a particularistic deal between the crown, representing the public interest, and the patentee.[71] The patentee had no initial right to receive a patent. Rather, the patentee offered particular benefits to the public and petitioned the crown for specific privileges in consideration.[72] The king used his discretionary prerogative power to decide whether the public interest justified the deal and what its specific terms should be.[73] Moreover, even when a deal of this kind was struck and a patent was granted, the patent was still subject to possible future reassessments of the policy justifications supporting it in the form of Privy Council proceedings. These could lead to revocation.

2. The Emergence of Patent Law

The origin of Anglo-American patent law is usually traced to the 1624 Statute of Monopolies[74] and a handful of monumental common law decisions from the early seventeenth century.[75] Did those early beginnings of patent law bring about a fundamental change in the institutional model of patents? Adam Mossoff recently argued that "the Statute of Monopolies represents the first definitive step toward the shift away from royal prerogative and privileges to common law

70. Similarly, when patents were reviewed in Parliament in 1621, a blurry distinction between "contrary to law" and "inconvenient" was employed and hence infringed on the rights of subjects. According to this distinction, an illegal patent was one that was contrary to a strict legal requirement. *See* Elizabeth Read Foster, *The Procedure of the House of Commons Against Patents and Monopolies 1621–1624*, *in* CONFLICT IN STUART ENGLAND: ESSAYS IN HONOUR OF WALLACE NOTESTEIN 57, 74–75 (William Appleton Aiken & Basil Duke Henning eds., 1960). *Id.* An inconvenient patent was one that was clearly obnoxious and injurious to the best interest of the commonwealth. Either one was a ground for attacking patents. *Id.* The distinction was often blurred in parliamentary debates. *See id.*

71. *See* Hulme, *supra* note 39, at 313–15.

72. *Id.*

73. *Id.*

74. Statute of Monopolies, 1624, 21 Jam. 1, c. 3 (Eng.).

75. The main cases are *Davenant v. Hurdis,* Moore 576, 72 Eng. Rep. 769 (K.B. 1599) (known also as the Merchant Tailor's Case); *Darcy v. Allen,* 77 Eng. Rep 1620 (K.B. 1603) (known also as the Case of Monopolies); *Cloth Workers of Ipswich* 78 Eng. Rep. 147 (K.B. 1615).

and legal rights," and even that the statute "transformed this natural right [of a patent] into a legal right, i.e., a civil right adjudicated in civil society."[76] In fact, while the statute and the common law decisions introduced some important developments, they did not break with the patent-privileges framework and they certainly were not a move in the direction of patent rights.

The Statute of Monopolies and the common law did not attempt to establish a patent system. Nor did they create anything that could even be called patent law. The fact that in later periods some fundamentals of both the patent system and patent law emerged out of those sources was, in the words of Christine MacLeod, "a quirk of history."[77] The statute and the decisions were part of an ongoing political and social struggle in seventeenth century England. They can only be understood in the context of that conflict and the political discourse of which they were an integral part.

One of the main axes of the conflict in tumultuous seventeenth century England was the issue of the definition, scope and limitations, if any, of royal power. Those who strove to minimize royal power presented their struggle in terms of preserving "English Liberties" and protecting the public good by prescribing limits to the crown's power. As one contemporary put it, it was a struggle to establish a commonwealth based on the principle that "common-weals are not made for King's [sic], but Kings for common-weals."[78] Early in this struggle, the royal power to grant monopoly privileges became a focal point because it was situated at a major junction of ideology and material interests.[79]

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76. Adam Mossoff, *Rethinking the Development of Patents: An Intellectual History 1550–1800*, 52 HASTINGS L. J. 1255, 1272–73, 1300 (2001). Mossoff seems quite aware of the fact that the statute was not "a radical break with past policies." *Id.* at 1273. Nonetheless he asserts a move toward "patent rights." *Id. passim.* Inasmuch as the argument refers to "legal rights" in the sense of rights to receive a patent, it is simply wrong. None of the limited innovations of the Statute of Monopolies implied in any way a move toward patent rights.

77. MACLEOD, *supra* note 29, at 15.

78. The citation is taken from Fuller's argument for the defendant in *Darcy v. Allen*. 74 Eng. Rep. 1131, 1135 (K.B. 1603).

79. *See* HAROLD G. FOX, MONOPOLIES AND PATENTS: A STUDY OF THE HISTORY AND FUTURE OF THE PATENT MONOPOLY 92–112 (1947); MARK KISHLANSKY, A MONARCHY TRANSFORMED: BRITAIN 1603–1714, at 98–100 (1996); MACLEOD, *supra* note 29, at 14–17.

The basic ideological division on the question of royal power was between an absolutist view of monarchical power and a rival position that the crown's power was limited.[80] The absolutists conceded that a king had to rule so to promote the public good, but they envisioned him as the sole arbiter of the public good, and denied that there was an external legitimate earthly power that could impose limitations on his judgments or powers.[81] "'[A] Prerogative in point of Government,'" in the words of a contemporary, could not "'be restrained or bound even by Act of Parliament.'"[82]

By contrast, an opposing position emerged that described the king's powers as limited to boundaries imposed by the common good and English liberties enforced by law. The law was envisioned as actually limiting the King's prerogative and restricting it to its proper zone.[83] "That which the King would doe," said Sir George Croke, "if it be against the common lawe or stattuts, the lawe doth not judge to be a prerogative in the Kinge."[84]

Thus, while absolutists saw the use of the prerogative in granting patents as "plenarie fullnes of power,"[85] their foes argued that it was limited by law.[86] "Kings cannot command ill, or unlawful things," Sir Dudley Digges said in 1626. Hence, "whenever they speak, though by Letters Patents, if the thing be evil, those Letters Patent are void."[87] In the political thought and rhetoric of the time, there emerged a distinction between "bad monopolies" and "good monopolies." Bad monopolies that were accused of a variety of ills were deemed prejudicial to the public good and to English liberties. Their grant was thus void and outside the proper powers of the crown. Good monopolies, usually presented as the exception, were

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80. J.P. SOMMERVILLE, ROYALISTS AND PATRIOTS: POLITICS AND IDEOLOGY IN ENGLAND, 1603–1640, at 35–41 (2d ed. 1999).

81. *Id.* at 37–43.

82. The speaker was Sir John Davies, Attorney General of Ireland. J.P. Sommerville, *The Ancient Constitution Reassessed: the Common Law, The Court and the Languages of Politics in Early Modern England*, *in* THE STUART COURT AND EUROPE: ESSAYS IN POLITICS AND POLITICAL CULTURE 39, 63 (R. Malcolm Smuts ed., 1996) (citations omitted).

83. SOMMERVILLE, *supra* note 80, at 40.

84. *Id.* at 97.

85. Sommerville, *supra* note 82, at 61 (citing Solicitor General Thomas Fleming in *Darcy v. Allen*).

86. SOMMERVILLE, *supra* note 80, at 40.

87. *Id.* at 97.

beneficial to the public and accordingly were within the powers of the king to grant.[88] As one member of the Long Parliament summarized, "[p]atents are Lawfull which are nott *ad Damnum Populi*."[89]

Discussions of patents for invention were part of this general discourse on monopolies. Like other royal grants of privilege, they were analyzed and argued in terms of abuse versus lawful use of royal prerogative, and public detriment versus public good. Parliament and the common law courts were the two main arenas in which the monopolies were attacked. The two lasting products of those institutions—the Statute of Monopolies[90] and the common law decisions—were clear manifestations of the ideological framework described here.

Neither the statute nor the common law cases were mainly preoccupied with patents for invention. The court cases involved various non-invention monopolies whose validity was attacked. The very assertion of jurisdiction to review royal grants stood in contrast to the extreme absolutist view.[91] The courts' decisions and the arguments of counsel went further in internalizing the structure of the political discourse on monopolies, however.[92] The fundamental common law criterion for reviewing the validity of monopoly grants came to be whether the grant served the public good. According to this, rule a grant that was assumed to be prejudicial to the public good was contrary to law, and thus invalid. Such conclusions were often softened rhetorically using the rather fictional form of "the king was deceived in his grant."

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88. FOX, *supra* note 79, at 165–66.

89. *Id.* at 165.

90. During certain periods Parliament was the main forum for attacking monopoly patents. Such attacks were held not only in parliamentary debates and general bills but also through investigations of specific patent grants and a procedure of "grievances." The procedure of examining patent grievances did not maintain a clear distinction between a legislative and an adjudicative function. Rather Parliament and its committees: (i) reviewed the lawfulness and the "convenience" of specific patents; (ii) summoned and questioned witnesses; (iii) heard arguments from parties; (iv) determined facts; and (v) issued judgments. *See* Foster, *supra* note 70, at 75–76.

91. FOX, *supra* note 79, at 95.

92. *Id.* at 165.

In *Darcy v. Allin*,[93] the best known and most influential of the early common law cases, both parties argued in exactly these terms. Nicholas Fuller, who represented the defendant, captured this joint framework when he presented the legal test for the validity of a monopoly in the form of a syllogism :

Major:	All patents made for the general good of the realm may restrain some subjects in their particular trades lawfully.
Minor:	But this patent is made for the general good of the realm.
Conclusion:	Therefore this patent may restrain some in their particular trades lawfully.[94]

This was exactly the structure of the political discourse of monopolies. *Darcy v. Allen* and the emerging common law internalized and popularized the distinction between lawful monopolies beneficial to the public and unlawful monopolies that were beyond the prerogative power.

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93. 74 Eng. Rep. 1131 (1603) (Other reports of this case use various spellings of the defendant's name, i.e., Allen and Allein. Coke was the only reporter to use the name *The Case of Monopolies*. 77 Eng. Rep. 1260 (1603). For consistency purposes, this article will refer hereinafter to the case as *Darcy v. Allen*.) Jacob Corre challenged the almost mythological status of *Darcy v. Allen* as a decisive blow against the royal prerogative by the common law courts. Jacob I. Corre, *The Argument, Decision and Reports of* Darcy v. Allen, 45 EMORY L.J. 1261, 1261 (1996). Corre shows that the judgment against the patentee (Darcy) was delivered with no judicial opinion. *Id.* The arguments were complex and involved many grounds for rejecting Darcy's suit. *Id.* at 1265. In the absence of judicial reasons, Corre explains, it is impossible to know to what degree, if at all, the decision challenged the prerogative grant power. *Id.* The later fame of the case arose mainly from Coke's report that was published years later and was heavily synthesized by his anti-monopoly perspective. *See id.* at 1263–64. Coke, who as Attorney General represented Darcy, included in the report as the opinion of the court a summary of what he claimed to be an oral communication to him from one of the judges. *Id.* The point was well taken. Nevertheless, whatever the judicial reasons were as reported, *Darcy v. Allen* remains an important landmark. At the very least, reports of the case reveal the way emerging common law thought about monopolies was synthesized and presented by a host of important and influential reporters who published their accounts years after the decision.

94. 74 Eng. Rep. at 1136. The problem with the patent at issue, Fuller explained, was that the minor proposition was false. *Id.*

The 1624 Statute of Monopolies followed an identical pattern.[95] The statute was a product of one of the rounds of the conflict over royal power that took place in the early 1620s. During its sessions, Parliament dealt individually with a flood of grievances related to monopolies.[96] It also tried to impose a broader ban on royal grants in the form of a general statute. The statute closely followed the rule/exception and the bad monopolies/good monopolies distinctions of the political and common law discourse. Section I, which was the heart of the statute, declared that "all Monapolyes and all Commissions Graunts Licences Charters and letters patents" are "contrary to the Lawes of this Realme, and so are and shalbe utterlie void and of none effecte."[97] Section III ordered that no person be able to use or exercise such monopolies.[98] Section II and IV established in clear terms the jurisdiction of the common law courts to examine and determine the validity of monopolies.[99] All ten other sections enumerated various exceptions to and exemptions from the general ban on monopolies.[100]

What was the place of invention patents within the newly appearing[101] legal framework of monopolies? Such patents constituted, at least initially, little more than a footnote in the scheme of the Statute of Monopolies and the common law decisions. In a few of the cases, hypothetical invention patents within certain limitations were mentioned as examples of lawful monopolies that would presumably serve the public good.[102] Similarly, patents for invention were added to the statute late in the legislative process[103]

95. *See* Statute of Monopolies, 1624, 21 Jam. 1, c. 3 (Eng.).
96. *See* Foster, *supra* note 70.
97. Statute of Monopolies, 1624, 21 Jam. 1, c. 3 (Eng.).
98. *Id.* § III.
99. *Id.* § II & IV.
100. *Id.*
101. Neither the Statute of Monopolies nor the common law standards were immediately strictly adhered to in practice. Their actual acceptance and implementation was gradual and protracted. *See* Mossoff, *supra* note 76, at 1276–77.
102. *See* Cloth Workers of Ipswich, 78 Eng. Rep. 147 (K.B. 1615); Darcy v. Allen, Noy 173, 74 Eng. Rep. 1131 (K.B. 1602).
103. Chris R. Kyle, *But a New Button to an Old Coat: The Enactment of the Statute of Monopolies, 21 James I cap. 3.*, 19 J. LEGAL HIST. 203, 208, 214 (1998).

as one exception, among many others, to the general ban on monopoly patents.[104]

In some respects, the statute and the common law introduced important modifications to the patent grant's institutional model. Most significantly, the royal prerogative to grant patents, previously assumed to be unlimited, was now circumscribed to a limited zone defined by law.[105] Only those monopolies that fell within the statutory or common law exceptions were lawful. Whenever the boundaries were exceeded the monopoly grant was deemed illegal and void.[106]

Additionally, the definition of invention patents as a discrete category of exceptions had significant implications. This carving out of the previously undistinguished group of patents contributed to their differentiation as a subset of grants with special characteristics. Moreover, for the first time, the legal definitions created general, uniform criteria that an invention patent had to satisfy in order to be valid. The Statute of Monopolies defined a lawful invention patent as follows:

> [A]ny tres Patents and Graunts of Privilege for the tearme of fowerteene yeares or under, hereafter to be made of the sole working or makinge of any manner of new Manufactures within this Realme, to the true and first Inventor and Inventors of such Manufactures, which others at the tyme of makinge such tres Patents and Graunts shall not use, soe as alsoe they be not contrary to the Lawe nor mischievous to the State, by raisinge prices of Comodities at home, or hurt of Trade, or generallie inconvenient.[107]

Many of those criteria were based on the existing common law decisions.[108] In particular the statute adopted the common law requirements: (1) that the "manufacture" invented not be used by others at the time of the grant; (2) that the patentee be the first

104. Statute of Monopolies, 1624, 21 Jam. 1, c. 3 (Eng.).
105. Kyle, *supra* note 103, at 216–17.
106. *Id.*
107. Statute of Monopolies, 1624, 21 Jam. 1, c. 3 (Eng.).
108. For the common law definitions of lawful invention patents, see *Darcy v. Allen*, 74 Eng. Rep. at 1139; see also *Cloth Workers of Ipswich,* 78 Eng. Rep. 148 (K.B. 1615).

inventor; (3) and that the grant be limited in time, formalized in the statute to a cap of fourteen years.[109]

Those were important developments, but they did not imply in any way a move toward patent rights. To begin with, the statute and the decisions were grounded in the period's political discourse on monopolies. The guiding principle of that discourse was not patent rights, but rather the rights of Englishmen to be free of abusive patents. Indeed, this was the essence of the new, uniform legal criteria for a valid invention patent. In fact, these were not patentability criteria, but rather non-patentability criteria. The new standards did not define when one had a right to a patent, but rather when a lawful patent *could* be granted.[110] It was not the right to receive a patent that was enforceable in a court of law, but only the right to invalidate a patent that did not meet the requirements.[111]

In two important respects, the decision to grant a patent remained a case-specific, discretionary policy decision grounded in royal prerogative. First, the legal framework created outer limits to the royal grant power.[112] Beyond those boundaries all grants were void. The underlying logic was that whenever one of those requirements was not fulfilled, an irrebuttable presumption arose that the grant was prejudicial to the public good. Yet within the allowed zone, the decision to grant patents remained as discretionary and case-specific as ever. There the crown remained free to consider and decide what kind of grant would serve the public good, and whether a specific grant would do so.

Second, and more subtly, the standard patentability criteria themselves were saturated with the concept of patents as tailored

109. The novelty and first invention requirements were different than the modern ones. They were based on a concept of invention whose focus was the introduction in practice of an economic activity not practiced in England at the time, rather than on technological discoveries. *See* Hulme, *supra* note 19, at 153; FOX, *supra* note 79, at 62.

110. *See* Walterscheid, *supra* note 22, at 874–76, 879.

111. *See id.*

112. *See* Mossoff, *supra* note 76, at 1272; Walterscheid, *supra* note 22, at 874–76, 880; *cf.* Kyle, *supra* note 103, at 216–17 (arguing that the Monopolies Act did not limit the royal prerogative and was "simply a declaratory statement of the common law position and the King's own views").

decisions involving case-specific policy determinations.[113] While those criteria imposed external limits on royal power in the name of the public good, many of them turned out to be merely triggers for substantial case-specific policy discussions and determinations.[114]

A sample of the seven conditions for a valid invention patent listed in Coke's authoritative commentary on the Statute of Monopolies demonstrates this point.[115] The requirement that the patent not be "to the hurt of trade,"[116] which Coke lifted from the statute's language but did not explain, was an obvious call for a case-specific, open-ended policy calculus. So was the "generally inconvenient"[117] condition. Here Coke's example of inconveniency was the invention of a fulling mill that could replace "labours of fourscore men, who got their livings by it."[118] Despite the innovation, a patent for such a machine would be invalid "for it was holden inconvenient to turn so many labouring men to idlenesse."[119] Coke read into the requirement that a patent not be "mischevious to the State" by raising of prices of commodities the condition that for "every such new manufacture that deserves a priviledge, there must be urgens necessitas, and evidens utilitas."[120]

Many of the general patentability criteria, in short, were channels for case-specific policy determinations, rather than standard requirements to be applied uniformly in all cases. The subtle change was that these final policy determinations were to be made not by the granting authority, but by the institution that was empowered to

113. 3 EDWARD COKE, INSTITUTES OF THE LAWS OF ENGLAND 183 (photo. reprint 1985) (1817) (listing the seven properties that items to be patented must have).

114. *See* FOX, *supra* note 79, at 102–08.

115. COKE, *supra* note 113, at 183. Coke was one of the main sponsors and framers of the statute. For a more detailed elaboration of Coke's commentary on the statute see, Walterscheid, *supra* note 22, at 876–80. Coke was one of the main sponsors and framers of the statute.

116. COKE, *supra* note 113, at 184.

117. *Id.*

118. *Id.*

119. *Id.*

120. *Id.* at 183.

enforce the patentability criteria, whether it be the courts or other institutions.[121]

The emerging legal framework of invention patents remained rooted in the privilege model on two levels: (1) the character of the power to grant patents within the lawful zone of valid patents, and (2) the character of the general patentability criteria defining the external limits of that zone. The future development of patents would evolve within those two dimensions.

3. Patent Rights? Patents Through the End of the Eighteenth Century

The story of English monopoly grants after the Restoration is one of a gradual decline in their significance as major tools for dispensing royal policies and of a resultant growing disinterest in them on the part of the crown.[122] A political climate that made extensive use of royal monopolies dangerous[123] and a changing theory and practice of the desirable channels for governmental action[124] resulted in a constant decline of monopoly grants.[125]

There were two implications of this decline. First, the myriad of forms of industrial and trade monopolies that proliferated during the early seventeenth century was gradually fading away, while patents for invention under the framework of the Statue of Monopolies rose to the status of the most common and significant category of patent grants.[126] Second, the demise in the importance of monopoly patents entailed a growing disinterest on the part of government.[127] This amounted to a general approach of indifference, which, in turn, led to a lack of thorough and strict scrutiny of the public benefits and the policy considerations involved with specific grants of invention patents.[128] Except for cases that involved some issue deemed to be

121. The other main institutional center for the ex-post enforcement and evaluation of patents was the Privy Council. *See supra* discussion accompanying notes 59–70; *infra* text accompanying notes 150–161.

122. *See* MACLEOD, *supra* note 29, at 20–39.

123. One contemporary summed it up in 1664 by remarking that the previous king had lost his head by granting patents such as the one that was proposed at that time. *See* FOX, *supra* note 79, at 156 n.14.

124. *See id.* at 157.

125. *Id.* at 154.

126. *Id.* at 157.

127. *See Id.* at 154–56; MACLEOD, *supra* note 29, at 20, 40.

128. *See* MACLEOD, *supra* note 29, at 41.

of direct and substantial relevance to a national interest, patents for invention came to be granted as a matter of routine and standard procedure with no specific investigation and discretion.[129]

The result of these developments was a growing gulf between "law in books" and "law in action."[130] Law in the books—legal doctrines as found in the formal sources of law—did not change at all for more than a century. It continued to be premised on the traditional concept of patents as case-specific, discretionary policy instruments under the post-Statute of Monopolies framework. Law in action, however—the actual social practices of the grant—changed and gradually moved away from the privilege framework.[131]

The procedure of patent petitions was governed by the Clerks Act of 1535.[132] The statute's original purpose, stated in its preamble, was to finance unsalaried government clerks.[133] It created a complex and relatively expensive bureaucratic maze that prospective patentees had to navigate on their way to their desired patent.[134] In later times this procedure received a fair amount of criticism for its obsoleteness and the procedural troubles it piled before petitioners.[135]

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129. *Id.* at 41–47.

130. *See generally* Roscoe Pound, *Law in Books and Law in Action*, 44 AM. L. REV. 12 (1910) (illustrating the difference between law in books and law in action).

131. *See generally* MACLEOD, *supra* note 29, at 49–55.

132. Clerks Act, 1535, 27 Hen. 8, c. 2 (Eng.).

133. *See id.*; MACLEOD, *supra* note 29, at 40 (describing modifications to the patent system to "bring more certainty into areas notoriously bereft of statutory guidelines").

134. The procedure involved ten separate stages taking place at different offices in London between which the applicant had to transfer the application, all involving substantial fees and time. *See* COULTER, *supra* note 20, at 16–18. Patent agents as a professional class appeared only at the second quarter of the nineteenth century, though those who had the means could hire others to take care of some of the bureaucratic errands involved earlier. *See* Dirk Van Zyl Smit, *"Professional" Patent Agents and the Development of the English Patent System*, 13 INT'L J. SOC. L. 79, 82 (1985); H.I. DUTTON, THE PATENT SYSTEM AND INVENTIVE ACTIVITY DURING THE INDUSTRIAL REVOLUTION, 1750–1852, at 86–96 (1984).

135. Charles Dickens satirized in his writing the clumsy and costly patent procedure and all the bureaucrats involved which "[n]o man in England could get a Patent for Indian-rubber band, or an iron-hoop, without feeing all of them. Some of them, over and over again." *See* CHARLES DICKENS, *A Poor Man's Tale of Patent*, *reprinted in* THE WORKS OF CHARLES DICKENS 113,

Still, the main pitfalls were procedural. Unless a patent was challenged, only one out of the ten bureaucratic stages involved was more than a mere formality.[136] The only substantive review was the report of the law officers, either the Attorney General or the Solicitor General, regarding the fulfillment of the Statute of Monopolies requirements.[137] Even during this stage the system was, for the most part, based on formal procedure rather than substantive discretion. In the usual case, the law officers did little to scrutinize petitioners' declarations of novelty, utility, and the expected social and economic effects of the patent.[138]

This bureaucratic momentum gradually developed into a general governmental approach to the grant of patents that Christine MacLeod labeled, somewhat misleadingly, "*laissez-faire*."[139] In most cases, petitioners who managed to clear all the formal, procedural hurdles received their patents with little investigation or discretion on the part of government officials.[140] Thus, in practice the system resembled a patent rights model. Although no person could claim or enforce a right to receive a patent, patents were usually issued in a standard procedure that involved no case-specific governmental discretion, and which created an increasingly standard set of entitlements. Thus, the seeds of the transformation of patents from particularistic privileges into standard rights were sown as a byproduct of neglect. The actual practice of patent grants moved inch by inch toward standardization, without any conscious planning or central direction.

The extent of this transformation of practice should not be exaggerated, however. The claim that the eighteenth century saw "the evolution of patents from royal prerogative to legally recognized

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119 (Andrew Lang ed., 1900); CHARLES DICKENS, LITTLE DORRIT ch. 10 (Cornwall Press 1951) (1857).

136. *See* MACLEOD, *supra* note 29, at 40–41.

137. *See id.* at 41.

138. *See id.* at 41–42.

139. *Id.* at 47. The term laissez-faire is misleading because the granting of patents constituted, then as today, active involvement on the part of the state in market conditions. The term simply points to the fact that in the common case government officials did little investigation and hardly weighed any policy considerations before they authorized such state involvement.

140. *See id.* at 40–41.

property right"[141] is at best an overstatement. First, the grant practices themselves remained equivocal in this respect. Beginning in late seventeenth century, invention patents were often granted with little substantive investigation.[142] This approach changed when a specific important state interest, such as the revenue or the military, was found to be directly implicated.[143] In such instances, the relevant government officials tended to become much more engaged in examining patent petitions, scrutinizing the social benefits offered, and drawing the grant's contours carefully.[144]

More importantly, the passive approach dominated only as long as no interested party objected to a particular patent grant. When there was an objection, it usually prompted the law officers to demand more information and conduct a more thorough investigation.[145] Furthermore, objections either ex ante—prior to the grant—or ex post—after it was complete—often resulted in a review process in the Privy Council.[146] Such procedures had all the traditional characteristics of case-specific policy deliberations.[147] In fact, the default attitude of initial passivity in the grant procedure was often explicitly justified on the basis of the always-present option of turning to the Privy Council if the patent was found contrary to law or inconvenient.[148]

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141. Mossoff, *supra* note 76, at 1258.

142. There are difficulties in assessing the exact frequency and degree of official examination mainly due to a lack of empirical information. One explanation for this lack of empirical data is that no reasons were provided for a patent application's rejection. *See* MACLEOD, *supra* note 29, at 42. The extent of scrutiny of patent applications also varied somewhat according to the persons who occupied the relevant legal positions. *See id.* at 44–45.

143. *See id.*

144. MacLeod explains that "[i]n those areas where its interests were directly involved, the crown was quite unscrupulous in its administration of patents." *Id.* at 36. Naval and military supplies "remained an area in which the usually *laissez-faire* attitudes of eighteenth-century administrations regarding patents were compromised." *Id.* at 37; *see id.* at 34–38.

145. *See id.* at 46–47.

146. *See id.*

147. *See supra* text accompanying notes 30–38.

148. In 1663, for example, Lord Treasurer Southampton supported his recommendation of Garill's patent application by saying that "'in case any unseen abuse be found out,' it could be rescinded by the Council." MACLEOD, *supra* note 29, at 47 (quoting PUB. RECORDS OFFICE, Doc. No. SP 29.82, fol. 32 (Eng.)).

Most scholarly accounts accept E. W. Hulme's description of the continuous jurisdictional struggle between the courts and the Privy Council. [149] By these accounts, the struggle ended in a dramatic case from 1753,[150] which "led to a reconsideration, from a constitutional standpoint, of the Council's jurisdiction," and the decision of the council to "divest itself of its functions."[151] By all indications, this narrative is simply wrong.

The evidence regarding the decline of Privy Council jurisdiction is sketchy at the moment, and it will take a thorough investigation of the records to reconstruct the exact process.[152] Even on the basis of current sparse evidence, however, two things seem clear. First, the relations between the Privy Council and the common law courts in the context of patents were more complex than a continuous conflict that ended only when the council finally submitted. While we do know of instances of conflict,[153] there is also much evidence of the council referring parties to the courts of law to try their claims.[154] Thus, alongside conflict there was coexistence and even some symbiosis between the two institutions.

Second, it does not appear that Privy Council jurisdiction over patents and the discretionary nature of the patent grant that it preserved ended abruptly in the middle of the eighteenth century. In

149. *See* Mossoff, *supra* note 76, at 1286; MACLEOD, *supra* note 29, at 59–60; 11 HOLDSWORTH, *supra* note 62, at 426–27.

150. Mossoff provides a clear and detailed summary of the 1753 incident. Mossoff, *supra* note 76, at 1285–86.

151. E. Wyndham Hulme, *Privy Council Law and Practice of Letters Patent for Invention from the Restoration to 1794* (pt. 2), 33 LAW. Q. REV. 180, 194 (1917).

152. All materials from the Privy Council activities during the eighteenth century are available only as original archival records in England. This inaccessibility probably explains the blind scholarly following of Hulme's mistaken or simply misleading description.

153. See, for example, a 1626 Privy Council stay for common law patent proceedings described in Edward C. Walterscheid, *The Early Evolution of the United States Patent Law: Antecedents* (pt. 3), 77 J. PAT. OFF. SOC'Y 771, 774 (1995). In 1624, while explaining the explicit designation of common law jurisdiction in the Statute of Monopolies, Glanville, a member of the House of Commons, commented that "heretofore when a man would speak against a patent of monopoly, it must be before a council table and there have a perpetual emparlance and could not have the trial of it by common law . . ." Foster, *supra* note 70, at 79 n.7.

154. *See* Hulme, *supra* note 67, at 72–73 (describing two patent disputes, one from 1677 and the other from 1680 that were referred to the courts of law).

fact, although Hulme wrote that the 1753 incident led to a divestment of the Privy Council powers in the field of patents, his own accounts detail subsequent Privy Council patent proceedings.[155] Existing research shows that such proceedings persisted at least up to 1794.[156]

Moreover, even in later times there seems to have been no apprehension inside the legal community that the Privy Council had divested itself of its patent jurisdiction.[157] Inclusion of revocation clauses that formally declared Privy Council jurisdiction to revoke patents continued until 1902.[158] As late as 1847, in one of the earliest patent law treatises, W.M. Hindmarch devoted a section to "the Revocation of a Patent by the Queen or Privy Council."[159] Hindmarch described such proceedings in terms that correspond to the traditional privilege concept: "The grant of a patent is a matter of grace and favour and therefore . . . the Crown may annex any conditions it pleases to the grant . . . with the view of enabling the Crown to determine any illegal grant which may be unadvisedly

155. *See* Hulme, *supra* note 151, at 191–93. The answer may be found in Hulme's explanation that after 1754 the Council limited itself "strictly to the performance of duties imposed by the defeasance clause in Letters Patent." *Id.* at 193–94. This "defeasance clause" is what I refer to as a revocation clause. *See supra* text accompanying notes 59–65. Again it is not entirely clear what Hulme meant. However, if the argument is about a division of labor between the courts and the council—the former dealing with the legal patent requirement and the latter exercising its jurisdiction to revoke inconvenient patents, then it is plain to see that, as long as such proceedings in the council survived, much of the discretionary flavor of patents persisted. It was exactly the revocation authority on the basis of the open-ended "inconveniency" ground that preserved the traditional character of patents as discretionary privileges.

156. According to Hulme (who searched the records up to 1810) and Davies, the last application was revoked by the Privy Council in 1794. Davies reports that the last record of actual revocation by the council is from 1779. *See* Hulme, *supra* note 151, at 193; Davies, *supra* note 22, at 103.

157. *See* Mossoff, *supra* note 76, at 1286.

158. *See* Davies, *supra* note 22.

159. W.M. HINDMARCH, A TREATISE ON THE LAW RELATING TO PATENT PRIVILEGES FOR THE SOLE USE OF INVENTIONS, AND THE PRACTICE OF OBTAINING LETTERS PATENTS FOR INVENTIONS 431 (London, Stevens & Norton & Benning 1846); *see also* RICHARD GODSON, A PRACTICAL TREATISE ON THE LAW OF PATENTS FOR INVENTIONS AND COPYRIGHT 49–50 (London, Joseph Butterworth & Son 1823).

made, without allowing the public to be put to the trouble or cost of resisting the unlawful patent."[160]

The general picture seems to be one of gradual decline of the Privy Council's role that lasted into the nineteenth century, accompanied by a long period of ambiguity. In this slow fossilization process, Privy Council proceedings slowly lost their practical and semantic importance in the patent system. By the mid-nineteenth century all that remained were hollow shells that the lawyers occasionally still referred to.

By the end of the eighteenth century English patents were far from having completed the transition from patent privileges to patent rights. The picture is rather one of flux and ambiguity as well as of divisions between competing views and different layers of discourse. On the level of popular references and learned treatments of the patent system, new concepts of patent rights supported by ideological justifications started to appear in the late eighteenth century. The inventor Joseph Bramah, for example, wrote in a 1797 letter to James Eyre, Chief Justice of the Common Pleas, that "invention . . . those efforts of the mind and understanding . . . may justly be denominated the right of every individual, . . . unconnected with any political regulation."[161]

One should be wary when reading such statements from contemporaries.[162] The terms "rights," "property," and "securing the property" are often used by contemporaries in the context of patents to mean no more than the traditional entitlement under the privilege framework. A 1791 anonymous publication that defined patents as "a grant of the crown substantiating private property" is a good example.[163]

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160. HINDMARCH, *supra* note 159, at 431.

161. MACLEOD, *supra* note 29, at 199 (citing JOSEPH BRAMAH, A LETTER TO THE RT HON. SIR JAMES EYRE 77 (London, J. Stockdale 1797)).

162. For a list of examples of the use of terms by contemporaries that fails to be sensitive to such subtleties, see Mossoff, *supra* note 76, at 1295–96. For examples of the use of terms such as "rights" by contemporaries insensitive to such subtleties, see *id.*

163. MACLEOD, *supra* note 29, at 199 (citing EDWARD BEETHAM, OBSERVATIONS ON THE UTILITY OF PATENTS 42 (4th ed., London, Ridgway, 1791); *see also* Mossoff, *supra* note 76, at 1301–02 (stating examples of mixed and obscure use of the different concepts of rights, property and the protection of patents).

The ideological divisions of the time regarding patents are often described in terms of a view of patents as natural rights, versus an opposing view of patents as state created privileges.[164] This, however, is only part of the picture. There were, in fact, two lines of division that did not completely overlap. One division was between those who claimed that patents were pre-political natural rights, recognized but not created by the state, and their opponents who viewed patents as state created entitlements.[165] There was a second disagreement over whether patents should be privileges granted on a case-specific basis by the crown, or general rights to which anyone who met general patentability criteria should be entitled.[166] The divisions with respect to these two different issues were not always identical. Some of those who claimed that patents were natural property rights did not seem to challenge the basic patent-privileges framework.[167] Others sang the praises of a patent rights regime under which the state had no discretion regarding the grant, and yet adhered to a positivist concept of patents.[168]

Whether it was from a natural rights or a positivist perspective, some new voices that spoke in terms of patent rights began to appear late in the century. Moreover, more learned theoretical references to patents began to construct an elaborate ideological justification to a system in which the sovereign did not make case specific policy decisions in the grant of patents.[169] Some were still complaining that

164. *See* DUTTON, *supra* note 134, at 18–19; Mossoff, *supra* note 76, at 1319–20.

165. *See generally* Mossoff, *supra* note 76 (arguing that while most historians of patent law agree that natural rights theories played little or no part in the development of patent law, in fact, there was substantial support for the natural rights theory of patents as well as the theory that patentees were no more than State issued privileges.).

166. *See* COULTER, *supra* note 20, at 80, 99–100.

167. *See* Mossoff, *supra* note 76, at 1256–57.

168. This view became popular mainly in the nineteenth century with the rise of utilitarian thinkers who denounced the idea of natural rights as "nonsense on stilts" and yet were in favor of a general patent regime based on general patentability criteria rather than specific governmental discretion. *See* COULTER, *supra* note 20, at 77–80. From this perspective, patents were state created rights whose standard content and scope should be set (as a general ex ante standard rather than a case specific-decision) as to serve the general social welfare. For the views of Bentham and Mill on patents, see COULTER, *supra* note 20, at 79–81; DUTTON, *supra* note 134, at 19–20.

169. *See* DUTTON, *supra* note 134, at 18–21.

"it was supposed that enquiry would be made, whether [patents] were deserved, before they were granted" and that "[l]ittle was it imagined that the whole ceremony would be the paying the fees, and taking the seal."[170] Adam Smith, however, celebrated the very lack of governmental discretion in the grant of patents, which he found to be one of the only brands of harmless monopolies.[171] Smith never clarified whether he was talking about the old privilege framework or referring to a hypothetical system of patent rights. The quality he admired in patents, however, was that it was the market rather than government that determined the inventor's compensation.[172] As Smith put it, "[f]or here, if the invention be good and such as is profitable to mankind, he will probably make a fortune by it; but if it be of no value he also will reap no benefit."[173] "[P]ecuniary rewards," he wrote, "would hardly ever be so precisely proportiond [sic] to the merit of the invention."[174]

Thus, the traditional argument that patents are preferable to other methods of rewarding and encouraging invention because they cost government nothing started acquiring different tones. The refined view not only recognized the cost advantage associated with patents, but also saw as an advantage the fact that government did not employ discrimination or discretion by evaluating the utility and desirability of particular inventions, whose value was left to the market.[175] In a 1774 pamphlet, one author explained that patents are desirable because by using that method "the eventual utility of such inventions is made the measure of reward."[176] Thus alongside arguments about patent rights, an ideological justification of a regime based on the market rather than government as the arbiter of value began to appear.

Despite such new sentiments, the patent system's basic institutional structure remained rooted in the privilege model well

170. 23 GENTLEMAN'S MAG. 235 (1753).
171. ADAM SMITH, LECTURES ON JURISPRUDENCE 83 (R.L. Meek et al. eds., 1978).
172. *Id.*
173. *Id.*
174. *Id.*
175. *See generally* MACLEOD, *supra* note 29, at 196.
176. *Id.* (quoting WILLIAM KENRICK, AN ADDRESS TO THE ARTISTS AND MANUFACTURERS OF GREAT BRITAIN 20 (London, Printed for Messrs. Domville et al. 1774)).

into the nineteenth century. Those urging reform were the first to admit as much. In 1829, a *Mechanics' Magazine* correspondent noted that "[T]he almost annual attempt at amending the patent laws are only so many trials to make the theory of privilege, and its consequent practice, fit the universal feel of right; but the crooked billet offers no fare that will fit."[177]

While some started thinking of and referring to patents as rights, many others adhered to the privilege model. The legal community was among those most resistant to change and most entrenched in the old privilege framework. In 1790 Lord Chancellor Thurlow wrote in dictum that "[i]f the *King* refused it [the patent], it would be upon reasons very unfit for me or for any one to dispute, because it rests entirely in his royal breast; and it cannot be in one more honourable."[178] Dictum it had to be, because apparently no one tried to argue in court that he had a right to receive a patent or that the crown could be enforced to issue one during this period.[179]

Virtually all commentators of the first patent treatises, which were written in the early nineteenth century, continued to refer to patents as a matter of royal "grace and favour" and explained that their specific content was to be determined by royal discretion in each case.[180] In his 1823 path breaking treatise on patents and copyright, Richard Godson had a subsection entitled "No Right to Demand Patent," which explained that:

> there is not any clause or enactment, by which the subject can *demand* them as a *right*. This great encouragement to industry, this fruitful source of wealth, is still the free gift of the King. It emanates from him as *the Patron of Arts and Sciences* at the humble request of his subject; and it is as a gracious favour that he extends this protection to the inventor.[181]

As late as 1846, Hindmarch could explain in his treatise that "inventors are *never entitled as of right* to letters patent, granting

177. 25 MECHANIC'S MAG. 229 (1836) (*quoted in* Van Zyl Smit, *supra* note 134, at 95).

178. *Ex Parte* O'Reily, 30 Eng. Rep. 259 (Ch. 1790).

179. *See* Walterscheid, *supra* note 18, (pt. 4) at 92.

180. *See, e.g.*, HINDMARCH, *supra* note 159, at 4.

181. GODSON, *supra* note 159, at 47 (emphasis in original).

them the sole use of their inventions, but they must obtain them from the Crown by petition, and *as a matter of grace and favour*."[182]

These were not the kinds of statements that sometimes survive as empty shells in the opening pages of legal treatises, echoing older conceptions already superseded in actual doctrine. On the contrary, these statements were well grounded in operable legal doctrines.[183] Patent doctrine underwent important changes in the late eighteenth century. Those changes related to the concept of the invention, the legal requirement of specification, and the consideration expected from the patentee in the patent deal.[184] It had no bearing on the legal model of patents as privileges.[185] Thus Collier, who opened the preface of his 1803 patent treatise by writing about "property" which is "daily assuming new forms" and of the patent as an "honourable reward of productive talent,"[186] reverted to the traditional privilege model when he started discussing actual doctrine.[187] In complete adherence to the familiar framework of case-specific royal discretion exercised within a prescribed scope, he explained that patents are granted as a matter of the royal prerogative of the king, who is "the arbiter of commerce" to "such persons as he shall think proper."[188]

By the end of the eighteenth century, the institutional model of patents as privileges was in a state of flux and ambiguity in England.

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182. HINDMARCH, *supra* note 159, at 4 (emphasis in original).

183. *See, e.g.*, GODSON, *supra* note 159, at 48 (stating that "proceedings are narrowly inspected by the King's law officers before they are sanctioned by the royal authority").

184. *See* Walterscheid, *supra* note 153, (pt. 3) at 792–802.

185. *See id.* at 792–93. Making a similar argument, Mossoff argues that the late eighteenth century transformation of English patent law reflected a move toward a Lockean conception of natural property rights. Inasmuch as the argument is that judicial rhetoric was influenced by concepts taken from Lockean natural rights thought, it seems plausible. However, it seems that Mossoff occasionally argues a stronger claim, that "the eighteenth century is the period in which patent doctrine is burned pure of its function as a tool of royal prerogative." Mossoff, *supra* note 76, at 1320. This claim is simply false.

186. JOHN DYER COLLIER, AN ESSAY ON THE LAW OF PATENTS FOR NEW INVENTIONS, at v, xiv (London, A. Wilson 1803).

187. *Id.* at 64–65.

188. *Id.* Regarding the term of the patent, Collier wrote that "motives may arise which shall induce the king to limit his grant of letters patent in such cases for a shorter term, but he cannot now extend them beyond the duration of *fourteen years*." *Id.* at 70 (emphasis in original).

Public discourse contained articulations of patents as rights and new ideological justifications about the market as the proper arbiter of value. Yet many other public pronouncements expressed adherence to the traditional privilege model or simply remained obscure on the subject. The administrative practices also created ambiguity, moving in the direction of standardization while not altogether deserting the discretionary privilege based practices. Legal doctrine and legal thought changed little in this respect and remained the firmest bastion of the traditional institutional model of patent privileges.

B. Colonial and State Patents

American colonial and state patents[189] were rudimentary Creole versions of the English patent grant. In those American colonies, and the states, that granted patents, the legislature assumed the role of issuing grants that conferred exclusive privileges of various kinds on specific individuals.[190] Each grant was an independent enactment that came into being through a standard legislative process.[191] These grants were part of a larger arsenal of tactics that the government employed to carry out its perceived power and duty to regulate the economy in the name of the public good.[192] The variety of methods included, *inter alia*, prizes, subsidies, payments of salaries to skilled artisans, loans, permission to hold lotteries for raising funds, exemptions from taxes and military service, and grants of limited monopolies for various economic activities.[193] Monopoly grants covered all kinds of enterprises, everything from mills, to iron works, to the operation of ferries.[194] The occasional grants that involved

189. "Patents" is a misnomer for the grants of exclusivity that were granted by colonial assemblies. Letters patent, as explained, were a form of the exercise of the royal prerogative and hence only the King could grant them. Nevertheless, I will use the term here for the sake of convenience. There is only sparse and scattered evidence of royal letter patents for invention in the American Colonies during the seventeenth and eighteenth centuries. *See, e.g.*, BUGBEE, *supra* note 6, at 72.

190. *See, e.g.*, P.J. FEDERICO, *Colonial Monopolies and Patents*, 11 J. PAT. OFF. SOC'Y 358, 331–32 (1929).

191. *Id.* at 367.

192. JOHN J. MCCUSKER & RUSSELL R. MENARD, THE ECONOMY OF BRITISH AMERICA 1607–1789, at 331–32 (2d ed. 1991).

193. *See id.* at 96, 343; FEDERICO, *supra* note 190, at 360; BUGBEE, *supra* note 6, at 57.

194. *See* FEDERICO, *supra* note 190, at 360–62.

technological innovations or inventions in the modern sense were not conceived of as a separate category.

One of the earliest grants issued in 1641 by the General Court of Massachusetts captures the flavor of these patents:

> Whereas Samu: Winslow hath made a [pro]position to this Court to furnish the countrey w[i]th salt at more easy rates then otherwise can bee had, & to make it by a meanes & way w[hi]ch hitherto hath not bene discov[e]red; it is therefore ordered, that if the said Samu: shall, w[i]thin the space of one yeare, set upon the said worke, hee shall enjoy the same, to him & his assosiat[e]s, for the space of 10 yeares, so as it shall not bee lawfull to any other p[er]son to make salt after the same way during the said years; p[ro]vided, nev[e]rthelesse, that it shall be lawfull for any p[er]son to bring in any salt, or to make salt after any oth[e]r way, dureing the said tearme.[195]

Colonial grants were deeply rooted in the patent-privileges model. Each grant was a specific discretionary decision by the political representatives of the community.[196] The fact that the colonial assembly, rather than the crown or some organ of the executive, issued those grants emphasized their discretionary and political character even more.[197] No one could assert a right for a

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195. 1 RECORDS OF THE GOVERNOR AND COMPANY OF MASSACHUSETTS BAY IN NEW ENGLAND (1628–1686) 331 (Nathaniel B. Shurtleff ed., Boston, William White Press 1853) [hereinafter RECORDS OF THE GOVERNOR].

196. *See* FEDERICO, *supra* note 190, at 366.

197. It is an interesting fact that the colonial legislatures rather than the governors or the councils came to exercise the power of granting local patents. If a miniature version of the English patent grants had been followed, the governor would have granted patents. However, it was local politics, material conditions, and with time probably, ideology too, rather than logical symmetries, that dictated otherwise. It would be useful to consider this in view of what is known as the rise of the assemblies' thesis. The rise of the assemblies' thesis highlights the process in which colonial assemblies gradually came to hold and exercise powers and responsibilities much broader than those allocated to them under the colonial government structure (and in some aspects much broader even than equivalent parliamentary powers in England). For a general discussion of the rise of the assemblies' thesis and references, see Christine A. Desan, *The Constitutional Commitment to Legislative Adjudication in the Early American Tradition*, 111 HARV. L. REV. 1382, 1391 (1998); Jack P. Greene, *Political Mimesis: A Consideration of the*

patent. Rather, one had to petition the legislature, offer specific public benefits, and pray for a special enactment that would create particular privileges.[198]

The typical technical practices of the grants reflected and created this privilege-based framework. Many of those practices resembled the early English grants. Petitions to the legislatures detailed particular public benefits an invention offered and asked for case-specific privileges.[199] Applicants typically elaborated specific tangible benefits that their inventions offered, such as lower prices, the supply of a scarce commodity, or labor savings.[200] The scope and kind of privileges granted, the conditions imposed on the grantee, and the duration of the grant varied substantially and were tailored specifically in each case. Sometimes colonial legislatures appointed special committees to inspect the invention at issue.[201] Such committees did not examine standard patentability criteria. Their role was rather to inform the legislature regarding the specific public benefits offered by the invention and its effect on various interests, the chances of success, and what kind of special privileges were suitable.[202]

Many colonial and state patents included working clauses, stipulating grants on the successful implementation of the invention within a prescribed time.[203] Working clauses, similar to the one-year implementation stipulation in Winslow's Massachusetts grant,[204]

Historical and Cultural Roots of Legislative Behavior in the British Colonies in the Eighteenth Century, 75 AM. HIST. REV. 337 (1969).

198. *See* BUGBEE, *supra* note 6, at 57, 63.

199. *See, e.g., id.* at 73–77 (documenting the petitions for patents in Maryland and South Carolina).

200. *See, e.g., id.* at 73–80.

201. Both of Maryland's colonial patents for invention issued in 1770 to John Clayton and Isaac Perkins were granted after inspection by an appointed committee. *See* PROCEEDINGS AND ACTS OF THE GENERAL ASSEMBLY OF MARYLAND 1769–1770, at 12, 231, 285, 289, 315–16, 334–35 (Raphael ed., Md. Historical Soc'y 1945) [hereinafter MARYLAND PROCEEDINGS]. Hugh Swinston's 1743 patent was granted in South Carolina after examination and report by an appointed committee. THE JOURNAL OF THE COMMONS HOUSE OF THE ASSEMBLY 1742–1744, at 178, 187–88, 191–92, 198, 204 (J.H. Easterby ed., S.C. Archives Dep't 1954) [hereinafter SOUTH CAROLINA JOURNAL].

202. *See, e.g.*, BUGBEE, *supra* note 6, at 81–82; SOUTH CAROLINA JOURNAL, *supra* note 201, at 187, 191–92.

203. *See* BUGBEE, *supra* note 6, at 81–82.

204. *See supra* note 195 and accompanying text.

appeared in almost all of the colonial patents for invention, including those made toward the end of the period.[205] Grants sometimes stipulated the quality or price of the product to be produced.[206] There were also occasional apprentice clauses mandating the grantee to take a certain number of local apprentices.[207]

All of these practices shaped the American patent grant as a variant of its English cousin, sharing its basic institutional model of patent privileges. Moreover, the seventeenth century developments that reshaped the English framework were, for the most part, absent in the colonies. There were no local equivalents of the English common law monopoly cases.[208] Interestingly, some of the more sophisticated colonies legislated local diluted versions of the Statute of Monopolies. Yet these were mainly declaratory acts with little practical effect. The Massachusetts 1641 *Body of Liberties* provided, "No monopolies shall be granted or allowed amongst us, but of such new Inventions that are profitable to the Countrie, and that for a short time."[209] This echoed the English political discourse regarding good monopolies and bad monopolies,[210] but it did nothing to give any bite to the declaration. The assembly that was the granting authority was left to decide on a case-specific basis what were "new Inventions that are profitable to the Countrie,"[211] and what were the appropriate conditions of the grant.

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205. *See* RECORDS OF THE GOVERNOR, *supra* note 195.

206. Maryland's 1770 patent to John Clayton, for example, noted his claim that his thresher will be sold at a "reasonable price." MARYLAND PROCEEDINGS, *supra* note 201, at 315.

207. Benjamin Crabb's 1750 patent for making candles, for example, stipulated that Crabb had to teach his process to five inhabitants of the colony. 3 ACTS AND RESOLVES, PUBLIC AND PRIVATE, OF THE PROVINCE OF THE MASSACHUSETTS BAY 546–47 (Boston, 1878).

208. In fact, there are no known colonial cases involving patent grants.

209. *The Body of Liberties of 1641; A Coppie of the Liberties of the Massachusets Colonie in New England*, *in* THE COLONIAL LAWS OF MASSACHUSETTS, REPRINTED FROM THE EDITION OF 1660 WITH THE SUPPLEMENT TO 1672, at 33, 34–35, para. 9 (Boston 1890) [hereinafter *Body of Liberties*]. This clause was retained in the 1648 enlarged version of the Massachusetts code. THE LAWS AND LIBERTIES OF MASSACHUSETTS 43 (Max Farrand ed., n.p. 1929) (1648). Connecticut enacted a similar law in 1672. THE LAWS OF CONNECTICUT: AN EXACT REPRINT OF THE ORIGINAL EDITION OF 1673, at 52 (1865).

210. *See supra* discussion accompanying notes 87–89.

211. *Body of Liberties*, *supra* note 209, at 34–35.

American patents also did not undergo a standardization process similar to the English one. In the colonies and states, it was a legislative procedure, not a bureaucratic one, that gave rise to patents. Thus, in all cases, a patent grant involved a process of political deliberation and discretion.[212] In periods when interest in patent grants was lost, there was no executive process that kept operating on its own momentum. The outcome was the absence of such patents rather than their issue on demand.

The state patent grant practice that persisted into the early nineteenth century retained all of the characteristics of the colonial grants. The only respects in which the later state grants showed any sign of change were growing differentiation of invention patents as a special subset of grants, and the gradual emergence of the modern concept of invention.[213] With one limited exception, the state grants did not move at all from the patent-privileges model toward patent rights. The exception was a provision in the 1784 South Carolina copyright statute that created equivalence between the newly created general entitlements of authors and those of inventors.[214] It provided, "[T]he Inventors of useful machines shall have a like exclusive privilege of making or vending their machines for the like terms of 14 years, under the same privileges and restrictions hereby granted to, and imposed on authors of books."[215] This was an important landmark that reflected the change in thought about patents, but it was not a definite move in practice from patent privileges to patent rights. The statute did not create any procedure or apparatus for the award of invention patents, and patents issued in South Carolina after the 1784 statute were still granted on a particularistic basis of specific petition and legislation.[216]

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212. *See id.*

213. The most salient indication of this trend was a growing tendency in state grants to require disclosure and specifications. *See, e.g.*, BUGBEE, *supra* note 6, at 85–88, 94.

214. IV STATUTE AT LARGE OF SOUTH CAROLINA 618–20 (David J. McCord ed., 1837–1868).

215. *Id.* at 620. There was a prior unsuccessful attempt in South Carolina to enact a general patent provision in 1744. *See* BUGBEE, *supra* note 6, at 80–81.

216. For examples of such grants, see BUGBEE *supra* note 6, at 93–95. Federico notes that "[i]n practice this section only operated as an invitation to inventors to request the legislature for patents." Federico, *supra* note 13, at 167.

Colonial and state patent grants and their bureaucratic practices, despite their peculiar variations, were deeply rooted in the traditional English patent-privileges institutional model. Ironically, by 1789, after more than a century of semi-independent development, the American local mutation was much more similar to the early English patent grant than were English patents of the time.

III. THE AMERICAN FEDERAL PATENT REGIME

The genesis of the American federal patents was in the Intellectual Property clause of the Constitution that gave Congress the power to "promote the Progress of Sciences and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[217] A lot has been written about this clause.[218] Some argue that the U.S. Constitution created the "first modern patent institution regime."[219] Others go further and draw from the constitutional text far-reaching conclusions about an underlying concept of patents as rights, and even as natural rights.[220] Such conclusions are not supported by the little we know about the legislative history of the clause. In fact, there is no reason to assume that, apart from creating the grant power on the federal level, the clause constituted any break with traditional patterns. The immediate sources of influence and inspiration available to the framers were English patents and the grant practice in the colonies and the states.[221] There is no evidence that any of the framers contemplated, at that stage, a break with those familiar patterns or the creation of a "modern patent system."[222]

Indeed, early potential patentees and the first Congress did not show any sign of interpreting the constitutional clause as

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217. U.S. CONST. art. I, § 8, cl. 8.

218. For comprehensive research, see EDWARD C. WALTERSCHEID, THE NATURE OF THE INTELLECTUAL PROPERTY CLAUSE: A STUDY IN HISTORICAL PERSPECTIVE (2002).

219. B. Zorina Khan & Kenneth L. Sokoloff, *History Lessons: The Early Development of Intellectual Property Institutions in the United States*, 15 J. ECON. PERSP. 233, 235 (2001).

220. *See, e.g.*, Frank D. Prager, *Historic Background and Foundation of American Patent Law*, 5 AM. J. LEG. HIST. 309, 318 (1961); BUGBEE, *supra* note 6, at 129–30; Ramsey, *supra* note 30, at 15–16. For critique see, WALTERSCHEID, *supra* note 218, at 212–20.

221. *See* Ramsey, *supra* note 30, at 15.

222. *See* WALTERSCHEID, *supra* note 218, at 218–20.

necessitating a deviation from existing practices.[223] Soon after Congress convened, a trickle of patent petitions arrived, and the trickle gradually grew into a flood.[224] Petitioners, some of whom referred to the constitutional clause, acted in familiar patterns.[225] Their petitions detailed the specific social benefits that their inventions offered and asked for private laws granting case-specific, exclusive privileges and sometimes other "encouragements," such as the commission of an official printer[226] or the financing of a scientific expedition.[227] As far as the petitioners were concerned, the only effect of the constitutional clause was to transfer the familiar grant practice to the federal level.[228] Congress did not seem to think otherwise. It did not reject the individual privilege petitions, but rather transferred them for consideration on the merits by a special committee. In at least one case, a private enactment was almost passed.[229]

At some point, for reasons that remain somewhat obscure, the House dealing with the various individual petitions decided to respond by enacting a general patent law.[230] After a complex legislative process,[231] Congress passed the 1790 Act to Promote the

223. *See id.* at 80–81.

224. For a survey of early petitions, see BUGBEE, *supra* note 6, at 131–41; WALTERSCHEID, *supra* note 34, at 81–87, 115–16.

225. *See* BUGBEE, *supra* note 6, at 133–41.

226. This request was included in Francis Bailey's petition for his printing device. *See id.* at 140.

227. In his April 1789 petition for a patent for items utilizing his method of determining longitude based on magnetic variation John Churchman also petitioned for funding of an expedition to Baffin's Bay. *See Proceedings in Congress During the Years 1789 and 1790, Relating to the First Patent and Copyright Laws*, 22 J. PAT. OFF. SOC'Y 243, 244 (1940) [hereinafter *Proceedings*].

228. *See* WALTERSCHEID, *supra* note 34, at 115–16.

229. This was Francis Bailey's petition. The House passed a private enactment granting him protection, but, as legislation of the general patent statute advanced, the Senate failed to act and the private enactment was never passed. *See* WALTERSCHEID, *supra* note 34, at 117.

230. 3 DOCUMENTARY HISTORY OF THE FIRST FEDERAL CONGRESS OF THE UNITED STATES OF AMERICA: HOUSE OF REPRESENTATIVES JOURNAL 29 (L.G. De Pauw et al. eds., 1977); MARYLAND PROCEEDINGS, *supra* note 201, at 246.

231. For a detailed account of the legislative process see WALTERSCHEID, *supra* note 34, at 84–143.

Progress of the Useful Arts.[232] To the extent that any break with past patterns occurred and the beginning of a modern patent system emerged, it was not in the constitutional clause, but under the new statutory framework.[233] This framework was first created by the 1790 Patent Act and underwent crucial changes during the following years.[234] The transformation of the institutional model of patents and the appearance of modern patent rights during the first half of the nineteenth century occurred through those statutory developments and related administrative practices, as well as through the emerging case law of patents.[235] In what follows, I describe the conceptual and institutional developments of patents in those three different arenas: (1) the formal statutory level, (2) the administrative grant practices, and (3) the emerging law of patents in the courts.

A. The 1790 Patent Act: An Early Examination System?

From the inception of the federal regime, a few voices began to argue that, in the words of John Fitch, "patents are now obtained as a matter of property and as a matter of right."[236] In 1792, Joseph Barnes went so far as to argue that "each American citizen has a constitutional right to claim that his property in the product of his genius should be secured by the National Legislature."[237] Probably best known—and misleading to some later observers—was the 1793 argument of Rep. William Murray, who framed the issue in terms of a sharp contrast between the English privilege-based system and supposed American patent rights:

> The minds of some members have taken a wrong direction . . . from the view in which they had taken up the subject under its analogy with the doctrine of patents in England.

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232. Act To Promote the Progress of Useful Arts (1790 Patent Act), ch. 7, 1 Stat. 109 [hereinafter 1790 Patent Act].

233. *See* WALTERSCHEID, *supra* note 34, at 109.

234. *See id.* at 145.

235. *See id.* at 243–80.

236. Frank D. Prager, *The Steam Boat Interference 1787–1793*, 40 J. PAT. OFF. SOC'Y 611, 633 (1958).

237. JOSEPH BARNES, TREATISE ON THE JUSTICE, POLICY AND UTILITY OF ESTABLISHING AN EFFECTUAL SYSTEM FOR PROMOTING THE PROGRESS OF USEFUL ARTS BY ASSURING PROPERTY IN THE PRODUCTS OF GENIUS 16 (Phila. 1792) (Barnes was James Rumsey's attorney and was active both in promoting individual patent applications and in lobbying for statutory reform).

> There is this strong feature which distinguishes that doctrine in that country from the principles on which we must settle it in this. These patents are derived from the grace of the Monarch, and the exclusive enjoyment of the profits of a discovery is not so much a right inherent as it is a privilege bestowed and an emanation of prerogative. Here, on the contrary, the citizen has a *right* in the inventions he may make, and he considers the law but as the mode by which he is to enjoy their fruits.[238]

All of this was a mix of wishful thinking, inaccuracies and rhetorical maneuvers.[239] The main significance of such utterances is that they indicate that by the late eighteenth century a crisp vision of the patent rights idea consolidated, with some ideological support.[240] A century earlier this would have been unthinkable. The legal framework and the administrative practices of the 1790s United States, however, were far from a full-blown patent-rights model.[241]

In some respects, the 1790 Act did constitute a break with previous traditions and the beginning of a modern patent system.[242] The Act consciously created a general patent regime.[243] Patents were no longer the case-specific, legislative grants of the states, nor even the peculiar English arrangement of defining the outer-limits of an exception to a general ban on monopolies. Instead, the Act defined in comprehensive terms the outline of a universal patent regime.[244] It created standard substantive criteria for patentability that were rooted in the English patent law tradition but also differed in some important respects.[245] The Act also defined uniform entitlements,

238. 3 ANNALS OF CONG. 855 (1793). For an example of taking this declaration at face value, see Ramsey, *supra* note 30, at 16.

239. *See* WALTERSCHEID, *supra* note 34, at 170.

240. *See id.* at 145.

241. *See id.*

242. *See id.*

243. *See id.* at 145–46.

244. *See id.* at 141–43.

245. The major substantive criteria defined by the statute were: patentable subject matter, priority of invention, novelty of the invention, and enabling disclosure. For a detailed discussion of those requirements and how they differed from English patent law, see WALTERSCHEID, *supra* note 34, at 109–43.

bestowed by a patent[246] and standard administrative procedures, for obtaining and granting patents.[247] These were important moves toward the generalization and standardization of patents.

Despite those significant developments, the statutory framework stopped short of creating patent rights. At the heart of the new arrangement stood a forum that came to be known as the patent board.[248] This board consisted of the Secretary of State, the Secretary of War, and the Attorney General. The Act mandated that, provided that all patentability requirements were met, for any two of these executive officers "it shall and may be lawful . . . if they shall deem the invention or discovery sufficiently useful and important, to cause letters patent to be made out in the name of the United States."[249]

The legislative history fails to supply direct evidence on this point. All indications are, however, that this, in effect, established the patent board as an arm of the executive with full discretionary power over patent grants. In other words, the patent board stood in the shoes that in England were reserved to the crown. The 1790 statutory framework is often referred to as an "examination system,"[250] but it was not an examination system in the modern sense. The patent board was not merely an administrative agency assigned the mere task of certifying the fulfillment of standard patentability criteria and the duty of issuing a patent when they were met. Instead, it was an arm of the sovereign with full discretionary power to weigh public policies and make case-specific decisions as to whether to grant. The granting authority was no longer the legislature as in the states, or the crown as in England. The institution of the patent board was, nevertheless, deeply rooted in the

246. The Act defined the entitlement as "the sole and exclusive right and liberty of making, constructing, using and vending to others to be used, the said invention or discovery." 1790 Patent Act, ch. 7, 1 Stat. 109.

247. *See* WALTERSCHEID, *supra* note 34, at 141–42.

248. It was also referred to as the "Commissioners for the Promotion of Useful Arts;" and the "Patent Commission." *See* P.J. Federico, *Operation of the Patent Act of 1790*, 18 J. PAT. OFF. SOC'Y 237, 238 (1936).

249. 1790 Patent Act, at sec. 1.

250. *See* Khan & Sokoloff, *supra* note 219, at 236 n.3; *see also* BUGBEE, *supra* note 6, at 144 (describing the establishment of patent examination as a procedure).

Anglo-American tradition of patents as particularistic discretionary policy decisions of the sovereign.

The 1790 Act said nothing about a right to receive a patent or a duty to issue one. It merely gave the board a discretionary power by providing that it "shall and may be lawful" to issue a patent in a case where the board finds that the invention is "sufficiently important and useful."[251] Moreover, there was no procedure or remedy that enabled petitioners to enforce their "rights" for a patent in cases of rejection. As far as one can tell, there is no inkling of the patent rights idea in the 1790 Act.

It seems implausible that anyone contemplated a forum with a personal constitution such as that of the board as having merely administrative responsibilities. The members of the board, specifically designated by the Act, were some of the highest ranking members of the executive. It seems unlikely that such officials were endowed with only the limited administrative task of applying and "examining" the fulfillment of standard patentability criteria. It is much more plausible that a forum composed of the Secretary of State, the Secretary of War, and the Attorney General was envisioned as a body that represented the most important national interests and was vested with a substantive discretionary power to make policy decisions in the grant of patents.

The board's role as a discretionary dispenser of state patronage does not just fit the immediate previous background of the English and colonial tradition of patent privileges, but also the general views of the time as to the proper role of government in regulating economic life. The dominant mainstream views in the 1790s regarding such issues were composed of variants of a Mercantilist or Whig outlook.[252] This outlook not only assigned government the right and duty to actively foster economic prosperity for the welfare and good order of the commonwealth. It also regarded the ordinary and desirable tools for such involvement as particularistic privileges and subsidies bestowed by government in a discretionary manner.[253]

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251. 1790 Patent Act, at sec. 1.

252. On the "Whig" political persuasion and its variants, see William W. Fisher, *Ideology, Religion and the Constitutional Protection of Private Property 1760–1860*, 39 EMORY L.J. 65, 72–74 (1990).

253. Probably the best, though not the only, example of the implementation of this outlook is the corporate charter. Corporate charters that created

Hence, the framework of the 1790 Patent Act seems to be a hybrid between the particularistic privileges of the traditional English and state grants and the modern patent-rights model. The Act created a kind of a "universalized privilege" system. It also established standardized substantive and procedural criteria for patentability as well as uniform patent entitlements. Yet the grant remained a matter of privilege. Similar to the English post-Statute of Monopolies arrangement, the patentability criteria only defined the outer limits of the discretionary grant power. Outside those limits, no valid patent could be issued. Within them, the sovereign's power to grant remained discretionary and no enforceable individual right for a patent existed.

What about the actual grant practices that created the social experience of patents? Were patents regarded and granted as "rights" or as "privileges" by petitioners and by the board during the short years of its operation between 1790 and 1793? Unfortunately, the sources available for reconstructing the exact practices and the guiding concepts of the patent board are limited.[254] Nevertheless, when one assembles the available pieces, it seems that the administrative practices of the patent grant reflected an understanding of the patent board as a body with full discretionary power, not only to "examine" the satisfaction of general patentability requirements, but also to engage in case-specific assessments of the relevant social benefits and the desirability of each grant.

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corporations and allocated them special case-specific powers and privileges were created by the state legislatures as individual enactments. This began to change gradually only in the mid-nineteenth century with the rise of general incorporation statutes. *See* JOSEPH S. DAVIS, ESSAYS IN THE EARLIER HISTORY OF AMERICAN CORPORATIONS (1917); Oscar Handlin & Mary Handlin, *Origins of the American Business Corporation*, 5 J. ECON. HIST. 1 (1945); LOUIS HARTZ, ECONOMIC POLICY AND DEMOCRATIC THOUGHT: PENNSYLVANIA, 1776–1860 (1948); MERRICK EDWIN DODD, AMERICAN BUSINESS CORPORATION UNTIL 1860 (1954).

254. A fire in the Patent Office in 1836 destroyed most original records. A few records relating to early patents were later reconstructed from various sources. Records of the Patent Office & Trademark Office, Record 241.2: Records of the Patent Office (Reconstructed Records) Relating to "Name and Date" Patents 1837–87, U.S. National Archives, *available at* www.archives.gov/research/research_room/federal_records_guide/patent_and_trademark_office_rg241.html#241.2.

It is clear that patents were not granted on demand, and that many petitions were rejected.[255] Little is known about the board's reasons for rejecting patent petitions. In fact, it is doubtful whether such reasons were issued. There is also no direct evidence of rejection on the basis of the board's general discretion or the "sufficiently useful and important" clause.[256] Yet, the fragmentary documents in existence convey a clear understanding by all persons involved that the board exercised discretionary power. Nathan Read, for instance, conducted a long correspondence with the board regarding his steam engine.[257] Read's basic stance, reflected in his letters, was that "[h]ow far my improvements merit an exclusive privilege, the Honorable Board will judge."[258] Six months later, Read was informed by Hennery Remsen, the board's clerk, that "the Commissioners, at their meeting in April, agreed to grant patents to all the claimants of steam-patents."[259]

Probably the best evidence in existence about the character of the patent board is in the few, full patent petitions that survived. In 1790, William Pollard petitioned for a patent in what he argued to be an improvement on Arkwright's spinning machine.[260] Pollard's

255. Fifty-seven patents were issued under the 1790 Patent Act. It is unknown how many petitions were rejected. However, based on the 1792 internal State Department report to which Federico points, there was a high rejection rate. The report listed 114 patent applications under active consideration at the time (hence it is likely that the total number was higher). A comparison to the total of 57 patents granted under the Act gives a general idea as to the rejection rate. Federico, *supra* note 248, at 244.

256. *See* WALTERSCHEID, *supra* note 34, at 174.

257. Some of the correspondence and related documents are reproduced in DAVID READ, NATHAN READ: HIS INVENTION OF THE MULTI-TUBULAR BOILER AND PORTABLE HIGH-PRESSURE ENGINE, AND DISCOVERY OF THE TRUE MODE OF APPLYING STEAM-POWER TO NAVIGATION AND RAILWAYS (Cambridge, Riverside Press, 1870).

258. Letter from Nathan Read to Thomas Jefferson (January 8, 1791), *in id.* at 53.

259. Letter from Henry Remsen to Nathan Read (July 1, 1791), *in* READ, *supra* note 257, at 115.

260. The petition is available at the National Archive. *See* Records of the Patent & Trademark Office, Record Group 241, 1 Copies of Specification for the "Name and Date" Patents, 1790–1803 [hereinafter Patent Petition]. It is quite possible that Pollard did not invent anything and that he was deploying the "improvement" argument as a thin cover over a petition for a patent of importation on Arkwright's design. WALTERSCHEID, *supra* note 34, at 164 n.61.

petition is remarkable because it is overwhelmingly devoted to describing in detail and exalting the substantial social benefits offered by his invention to the United States. Pollard referred the board to "An account of the Cotton Mills in Great Britain & an Estimate of the Cotton Manufactory of that Country," a list of statistics that demonstrated the dramatic increase in productivity in the years 1781–1787, presumably attributable to Arkwright's machine. The following prose followed:

> in the Southern states where young negroes & weakly disabled Men & Women are at present a [Burden?] to their owners they may in these cotton mills be employed to advantage, and the same observations may be extended to the poor white inhabitants in all our large towns. . . . One girl or boy from eight to fourteen years of age will tend from 30 to 50 spindles, & it is necessary to have man or woman to every ten children, to keep order no exertion of strength is required in the spinning apartment . . . Your Petitioner therefore prays that in consideration of the expense & trouble he hath been at . . . so as to perfect a machine which promises such extensive advantages to these United States . . . that your honorable board will be pleased to grant him . . . the sole and exclusive rights and liberty of making constructing & using of & of vending to others . . . for fourteen years.[261]

Pollard also added a promise to submit his prices to inspection by the board. In 1792, the relentless Pollard, who received his patent in December 1791, wrote Jefferson and suggested that the board (and possibly also "our worthy President") would visit and see "to what extent it may be carried, and its usefulness in such a Country as ours."[262]

Similarly, John Fitch devoted the bulk of his June 1790 patent petition for his steamboat[263] to demonstrating the "great immediate utility, and the important advantages which would in future result

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261. Patent Petition, *supra* note 260.

262. 24 Letter from William Pollard to Thomas Jefferson (June 26, 1792), *in* THE PAPERS OF THOMAS JEFFERSON 126 (John Catanzariti ed., 1990).

263. For a reproduction of the petition, see WILLIAM THORNTON, SHORT ACCOUNT OF THE ORIGIN OF STEAM BOATS 13–14 (Washington, Elliot's Patent Press 1814).

therefrom, not only to America, but to the world at large."[264] Fitch supplied long descriptions of the public benefits that were expected to follow from his invention, including "increased value [that] will be given to the western territory" due to the fact that "[t]he western waters of the United States, which hitherto been navigated with great difficulty and expence, may now be ascended with safety, conveniency, and great velocity."[265] To that he added that these advantages would result in a "great saving in labour of men and horses, as well as expense to the traveller."[266] Fitch's petition was thus in the vein of the traditional Anglo-American grant petitions. It offered specific public benefits and appealed to the sovereign's discretionary power to grant, as Fitch put it, "public countenance and encouragement."[267]

In a 1792 petition, Oliver Evans was more succinct, but he too made a point of arguing that "[t]hese engines are of such simple Construction that they may with Convenience be applied to move any kind of machinery that requires either a Circular or Vibrating motion And to the propelling of land Cariages with heavy burdens in an easie [sic] cheap and powerful manner."[268]

In short, petitioners' views of the board were clearly saturated with traditional privilege concepts. Their petitions reflect the assumption that the board's role was to examine the public benefits of their invention and use its discretionary power in deciding whether it merited protection.[269] It is possible that the board spent some time certifying the statutory patentability criteria such as novelty, although it seems that it purposefully bypassed deciding the most significant priority dispute brought before it.[270] Yet, the bulk of the

264. *Id.* at 13.
265. *Id.*
266. *Id.* at 14.
267. *Id.*
268. The petition of Oliver Evans is reproduced in 24 THE PAPERS OF THOMAS JEFFERSON, *supra* note 262, at 684. Evans never received a patent for this particular invention. *Id.*
269. *See id.*
270. The board was faced with conflicting claims to priority regarding steamboat related inventions by four inventors: John Fitch, Nathan Read, James Rumsey, and John Stevens. Although opinions differ, it seems that the board ultimately avoided the questions by granting patents to all four inventors, leaving issues of coverage and potential conflicts to be decided by

available materials from the board's work revolve around the usefulness and public benefits expected to follow from specific inventions.[271] There is no shred of evidence that anyone assumed a patent was a right, much less that anyone tried to turn to the courts to force the board to grant a patent.

In other respects, the grant's administrative practice broke with previous patterns of patents as case-specific privileges. There appeared signs of universalization and standardization.[272] It appears that patent grants were phrased rather uniformly right from the start. Not only were the grants limited to the standardized statutory privileges, but even on the points where the board had discretionary power under the statute uniformity seems to have been the norm.[273] Thus, the duration of all grants was that of the statutory cap of fourteen years.[274] Unlike the colonial and state grants, the federal patents contained no case-specific limitations or provisions and no working clauses. Finally, the board began developing its own uniform rules of patentability to govern its decisions even within the discretionary zone defined by the statute.[275] The degree to which these self-imposed uniform rules existed and were applied up to 1793 is unclear. [276] To the extent that such rules governed the decisions of the board, however, they further blurred the line between the old privilege regime and the emerging right framework.

The short-lived 1790 federal patent regime was not equivalent to the modern rights-based patent system. Rather, all indications are that it was an intriguing hybrid. The statutory framework and the administrative practices moved significantly toward standardization,

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the courts. *See* WALTERSCHEID, *supra* note 34, at 184–94; Federico, *supra* note 248, at 249 (arguing that the board likely decided the priority question).

271. *See* WALTERSCHEID, *supra* note 34, at 193 (discussing whether the discovery is "sufficiently useful and important").

272. *See* 1790 Patent Act, ch. 7, sec. 1, 1 Stat. 109.

273. *Id.*

274. *Id.*

275. In 1814 Jefferson wrote that "the patent board, while it existed, had proposed to reduce their decisions to a system of rules." But he also added that "[t]hey had done but little when the business was turned over to the courts of justice." *See* Letter from Thomas Jefferson to Dr. Thomas Cooper (Aug. 25, 1814) *in* 14 THE WRITINGS OF THOMAS JEFFERSON 174 (A.A. Lipscomb ed., 1904).

276. *See* WALTERSCHEID, *supra* note 34, at 183.

but the fundamental character of modern patents as rights had not yet consolidated.

B. The 1793 Patent Act: The Registration Years

In 1793, after less than three years, the 1790 Patent Act was replaced by a fundamentally different regime. Complaints from petitioners about delays and difficulties in obtaining patents may have played some part, but it appears that the main drive behind the change came from the patent board members overwhelmed with the burden of patent applications.[277] The essential difference of the Patent Act of 1793[278] was that it created a registration system—that is to say, the authority in charge of issuing patents was allocated a minimal role.[279] It was neither to certify standard patentability criteria nor to exercise discretion regarding the public desirability of the grant.[280] Instead, its role was limited to issuing patents on demand whenever a few procedural demands were met and the petitioner alleged that he met the substantive patentability criteria.[281]

Although the text 1793 of the Act still mandated simply that "it shall and may be lawful for the . . . Secretary of State, to cause letters patent to be made out,"[282] it was clear that under the operation of the new regime, patents would be issued on demand, upon the satisfaction of a few procedures. Gone was the patent board and consideration of patent petitions by top-rank cabinet members. Under the 1793 regime, patents were handled by clerks of the State Department, and by the Patent Office, established by Madison as a subdivision of the department in 1802.[283] Despite attempts by William Thornton, the dominant head of the Patent Office, to assert some examination powers and impose requirements not explicitly mentioned in the statute,[284] the practice under the 1793 regime was

277. *See id.* at 195. In a 1792 letter, Jefferson complained of the time demands of his patent duties that resulted in him being "oppressed beyond measure," and expressed his wish to be relieved of those duties. *Id.* at 195 n.1.
278. Act To Promote the Progress of Useful Arts (1793 Patent Act), ch. 11, 1 Stat. 318.
279. *See id.* at sec. 1.
280. *Id.*
281. *Id.*
282. *Id.*
283. WALTERSCHEID, *supra* note 34, at 253–54.
284. *See id.* at 254–57, 259–68.

one of registration. The patent office exercised no powers of examination.[285] In an 1811 pamphlet, Thornton himself instructed potential patent applicants, "there is at present no discretionary power to refuse a patent."[286] Years later, in 1836, a congressional select committee observed that "[t]he granting of patents . . . is but a ministerial duty. Every one who makes application is entitled to receive a patent."[287]

Despite the swing of the pendulum all the way to issuance on demand, the 1793 framework did not introduce the modern institutional model of patent rights. Doing away with any examination and discretionary powers at the issuance stage did not decide the question of patents as rights or privileges. It merely postponed it. In other words, the 1793 system shifted the real gravity center to ex-post review in the courts. While the issuing authority was deprived of any meaningful role, all substantive decisions regarding patents were now to be made by the courts whenever a conflict was laid at their doors.[288] Ironically, while de jure the 1790 regime was closer to the British one, the 1793 framework resembled the de facto situation in Britain, where by that time patents were granted, in practice, with little examination or discretion.[289] All patentability questions were deferred to the courts.[290] Members of Congress, it appears, were aware of the parallel. As Rep. Williamson explained, the proposed Act was "an imitation of the Patent System of Great Britain" and was meant to "circumscribe the duties of the deciding officer within very narrow limits."[291]

This left the courts to not only interpret and apply the standard patentability criteria, but also to shape the basic model of a patent as a privilege or a right. Since the Statute of Monopolies, the character of patents as case-specific discretionary privileges had two aspects: (1) the issuance process; and (2) the patentability criteria, many of

285. *See* 1793 Patent Act, at sec. 1.

286. WILLIAM THORNTON, PATENTS (1811), *reprinted in* 6 J. PAT. OFF. SOC'Y 98 (1923).

287. JOHN RUGGLES, SELECT COMMITTEE REPORT ON THE STATE AND CONDITION OF THE PATENT OFFICE, S. DOC. NO. 228 (1836) *reprinted in 1836 Senate Committee Report*, 18 J. PAT. OFF. SOC'Y 856 (1936).

288. *See* WALTERSCHEID, *supra* note 34, at 355–56.

289. *Id.* at 235–36.

290. *See id* at 355–56.

291. 3 ANNALS OF CONG. 855 (1793).

which triggered particularistic policy determinations.[292] Moving to a registration system eliminated the first aspect, but it left open the question of whether the rules of review shaped by courts would constitute patents as standardized rights or as discretionary, policy-based privileges. To some extent, the institutional character of the bodies placed in charge—the courts of law—had already decided the question. Only to some extent, though. Courts and judges would battle over the nature of patents for the next half a century, with the patent-rights vision winning the day gradually, but not without resistance.

C. Patents in the Courts

After 1793, courts became the main institutions wielding the power to review and shape patents. Initially, at least some of the judges saw themselves as stepping into the shoes of the patent board. Judge Van Ness gave a lucid account in this vein in 1821.[293] Van Ness contrasted the American patent system with the English system, and with the 1790 regime.[294] In England, he explained, the proceedings for obtaining a patent are "tedious" and involved ample opportunity for challenging the patent and considering its merit, although by this time this was true mainly as a matter of formal law rather than actual practice.[295] Similarly, the 1790 regime created the patent board and "made [it] the duty of these officers to inquire into the utility and importance of the proposed patent before it issued."[296] Under the new system, he explained,

> [I]t seems to me equally required by considerations of expediency and public safety that, when all preliminary inquiries are abolished, and monopolies and patents freely and gratuitously given to all who present themselves in the character of inventors or discoverers, there should be some easy and summary mode of investigating their merits and deciding on their validity.[297]

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292. *See supra* discussion accompanying notes 116–120.
293. *See* McGaw v. Bryan, 16 F. Cas. 96 (S.D.N.Y. 1821) (No. 8 793).
294. *See id.*
295. *Id.* at 98.
296. *Id.* at 102.
297. *Id.* at 99.

The new power in charge of reviewing patents, Van Ness concluded, was a judge invested with "a plenary supervision over the legality of patents" and with "a discretionary power."[298] By this account, the courts were now entrusted with the exact role that was carried out in Britain by organs of the crown, and under the 1790 American regime by the patent board.[299] In 1818, Joseph Ingersoll, arguing before the Supreme Court, repeated the same argument when he stated, "[t]he jury are substituted for the *board*, which, under the first law, was to decide whether the supposed invention was 'sufficiently useful and important' for a patent."[300]

Van Ness and Ingersoll saw the role of courts—whether a judge or jury decided—as equivalent to the discretionary power of the patent board, except for the fact that it was to be invoked in ex-post challenges. At the same time, however, there emerged an opposite view that strove to shape the courts' power over patents in a thoroughly different way. As observed by George Armstrong,[301] the main battleground for those conflicting views was the interpretation and application of the statutory requirement that the invention be "useful."[302]

One line of utility cases dovetailed with the courts understanding of themselves as the new locus of the traditional discretionary power over patent grants. The utility requirement was the main valve through which courts applied the power to review patents based on their discretionary assessments of the net public effects of specific inventions. In 1810, in *Whitney v. Carter*,[303] when Eli Whitney's cotton gin patent was challenged, testimonies were produced "to prove the origin and progress of his invention."[304]

298. *Id.* The term "discretionary power" was used by Van Ness in regard to the judges of the federal district courts that, according to one of the proposals debated during the legislation of the 1793 Patent Act, were to have the power to issue patents. His argument was that the ex-post review power by the court that was ultimately adopted was the equivalent of that function. *Id.*

299. *See id.*

300. Evans v. Eaton, 16 U.S. (3 Wheat.) 454, 488 (1818).

301. George M. Armstrong, Jr., *From the Fetishism of Commodities to the Regulated Market: The Rise and Decline of Property*, 82 NW. U. L. REV. 79, 91–96 (1987) (citing numerous cases of judicial interpretation).

302. *See* 1790 Patent Act, ch. 7, sec 1; 1 Stat. 109, Act To Promote the Progress of Useful Arts (1836 Patent Act), ch. 357, sec. 7, 5 Stat. 117, 120.

303. 29 F. Cas. 1070 (C.C.D.Ga. 1810) (No. 17,583).

304. *Id.* at 1071.

When arguing the utility question, Whitney's counsel rhetorically stated that, "the court would deem it a waste of time to dwell long on this topic."[305] He went on to provide the following detailed description of the public benefits of the cotton gin:

> The whole interior of the Southern states was languishing, and its inhabitants emigrating, for want of some objects to engage their attention, and employ their industry, when the invention of this machine at once opened views to them which set the whole country in active motion. From childhood to age, it has presented us a lucrative employment. Individuals who were depressed with poverty, and sunk in idleness, have suddenly risen to wealth and respectability. Our debts have been paid off, our capitals increased, and our lands have trebled in value. We cannot express the weight of obligation which the country owes to this invention; the extent of it cannot now be seen. Some faint presentiment may be formed from the reflection that cotton is rapidly supplanting wool, flax, silk, and even furs, in manufactures, and may one day profitably supply the want of specie in our East-India trade. Our sister states also participate in the benefits of this invention; for, besides affording the raw materials for their manufactories, the bulkiness and quality of the article afford a valuable employment for their shipping.[306]

The reported cases of the time indicate that this was not an exception. When the utility question was discussed, courts were often provided with substantive evidence and arguments regarding the social benefits and effects of the relevant inventions.[307]

Two sets of related ideas were bundled together in this approach. First, the utility requirements served as the main instrument that enabled courts, at least to some extent, to carry out

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305. *Id.* at 1072.

306. *Id.* at 1072.

307. *See, e.g.*, Langdon v. De Groot, 14 F. Cas. 1099 (C.C.S.D.N.Y. 1822) (No. 8059); Stanley v. Whipple, 22 F. Cas. 1046, 1048 (C.C.D.Ohio 1839) (13,286). *Cf.* WILLARD PHILIPS, THE LAW OF PATENTS FOR INVENTIONS 137 (1837) (referring disdainfully to "some of the earlier cases in Pennsylvania and Massachusetts" in which substantive inquiries into the merits of potentially infringing inventions were undertaken).

the traditional role of the sovereign in granting patents.[308] Substantive utility inquiries were, in fact, a somewhat fossilized form of government using its plenary discretion to ascertain the public interest and allocate "encouragements" on a particularistic basis.[309] Second, this understanding of utility was also embedded in traditional concepts of the intrinsic value of resources[310] and of objective *fair-price* of commercial exchanges.[311]

The 1822 *Langdon v. DeGroot* decision exemplified the interaction of those ideas in the substantive utility mode of thought.[312] The court upheld a trial court instruction to the jury that the plaintiff's invention was not useful.[313] Judge Livingston relied on the concept of patents as discretionary grants when he explained that each invention must "be beneficial to the community" and offer "benefits [that] are of sufficient consequence to be protected by the arm of government."[314] When he applied this requirement to the invention at hand, an attractive wrapper for cotton wool products, Livingston's reliance on a pre-market conception of value became apparent. He concluded that there were no "advantages which the public are to derive from it."[315] When faced with the objection that the public was willing to pay "an enormous additional price" for the new warping, he responded that this "extravagant premium" was exactly what the consumer who "literally receives no consideration" had to be protected against.[316] Utility, in other words, was to be evaluated by the court, which was entrusted with protecting the public interest, and not by the market. This was exactly the point of

308. *Cf.* PHILIPS, *supra* note 307, (noting that early cases required that the "community . . . receive some benefit from the invention").

309. *See id.* at 20 (discussing a temporary monopoly as an appropriate reward for creating a useful improvement).

310. *See* Armstrong, *supra* note 301, at 86–91 (relating the idea of intrinsic value and its gradual replacement to that of market value in nineteenth century economic and political thought).

311. *See* MORTON HORWITZ, THE TRANSFORMATION OF AMERICAN LAW 1780–1860, at 161–73 (Oxford Univ. Press 1992).

312. *See Langdon*, 14 F. Cas. at 1099–101.

313. *Id.* at 1100–01. Part of the controversy in the case was not over the standard of utility, but rather regarding the adequate decider of such questions: judge or jury.

314. *Id.* at 1100.

315. *Id.* at 1100–01.

316. *See id.*

fusion between the two sets of ideas. By adopting a worldview that refused to hand over the measure of public utility to the market, the court occupied the role of a discretionary arbiter of intrinsic social value. In the words of Livingston:

> When congress shall pass a law, if they have the right so to do, to encourage discoveries by which an article, without any amelioration of it, may be put off for a great deal more than it is worth, and is actually selling for, it will be time enough for courts to extend their protection to such inventions. . . .[317]

The conservative interpretation of utility retained some of the traditional character of patents as privileges and the ideological framework that supported it. Parallel to this interpretation, however, a conflicting line of cases appeared that challenged its fundamental premises. Justice Story, in a series of patent decisions, was a leading inspiration for this new line.[318] In 1817, Justice Story first deployed his new conception of utility in *Lowell v. Lewis*.[319] He vigorously rejected the defendant's argument that the invention offered no public benefits because it was inferior to other similar devices already in use.[320] Under the conservative utility framework, this was a rather common argument, but Story launched an all-out assault on this "broad and sweeping doctrine."[321] "All that the law requires," Justice Story explained, "is, that the invention should not be frivolous or injurious to the well-being, good policy, or sound morals of society. The word 'useful,' therefore, is incorporated into the act in contradistinction to mischievous or immoral."[322] Story's telling examples of a non-useful invention were "a new invention to poison people, or to promote debauchery, or to facilitate private assassination."[323]

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317. *Id.* at 1101.
318. Lowell v. Lewis, 15 F. Cas. 1018 (C.C.D. Mass. 1817) (No. 8568); Bedford v. Hunt, 3 F. Cas. 37 (C.C.D. Mass. 1817) (No. 1217); Earle v. Sawyer, 8 F. Cas. 254 (C.C.D. Mass. 1825) (No. 4247).
319. *See Lowell*, 15 F. Cas. at 1018.
320. *Id.* at 1019.
321. *See id.*
322. *Id.*
323. *Id.*

Despite the role still allocated to the judge as the guardian of society's moral standards,[324] Story's new formula constituted a frontal assault on the two basic premises of the traditional view of utility. Courts under the new interpretation developed by Story were limited to ascertaining whether an invention crossed the line of being "mischievous" or "obnoxious."[325] They lost their role as the traditional discretionary arbiters of the social benefits of inventions, and the extent to which they deserved governmental privileges.[326] As Story put it, "whether it be more or less useful" was irrelevant to the public.[327] Who then shall judge the value of inventions? Here, Story explicitly appealed to a market-conception of value, very similar to the one that started to appear in late eighteenth century patent thought in England.[328] "If its practical utility be very limited," Story said, "it will follow, that it will be of little or no profit to the inventor; and if it be trifling, it will sink into utter neglect."[329] In Story's new vision the court lost its role as the discretionary allocator of reward in the name of the public interest, and the market rose as the only measure of value.[330]

The conflict between these two lines of cases continued, but Story's new framework gradually prevailed in the courts.[331] Treatise writers immediately and uniformly adopted Story's views. In 1837, Philips declared that "the construction of Mr. Justice Story . . . is

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324. This bundling of the ruling with the role of the judge as the guardian of society's moral standards probably misled George Armstrong in respect to *Lowell*. Armstrong, who keenly identified the significance of the transformation of the utility requirement, mistook the decision as being representative of the traditional conservative line of cases. *See* Armstrong, *supra* note 301, at 92.

325. Bedford v. Hunt, 3 F. Cas. 37, 37 (C.C.D. Mass. 1817) (No. 1217).

326. *Cf.* PHILIPS, *supra* note 307, at 142 ("[I]t is not the province of the court to go into the question of the extent or degree of usefulness.").

327. *Lowell*, 15 F. Cas. at 1019.

328. *See supra* text accompanying notes 169–176.

329. *Bedford*, 3 F. Cas. at 37.

330. Story would launch an almost identical attack on the originality requirement in copyright law. *See* Gray v. Russell, 10 F. Cas. 1035 (C.C.D. Mass. 1839) (No. 5728); Emerson v. Davies, 8 F. Cas. 615 (C.C.D. Mass. 1845) (No. 4436).

331. *See, e.g.*, Kneass v. Schuylkill Bank, 14 F. Cas. 746 (C.C. Pa. 1820) (No. 7875); Whitney v. Emmett, 29 F. Cas. 1074 (C.C.E.D. Pa. 1831) (No. 17,585).

now universally adopted in the United States."[332] He went on to elaborate the new orthodoxy according to which "it is not the province of the court to go into the question of the extent of degree of usefulness."[333] Earlier he explained that a patent is the "most equitable" reward because invention "is graduated according to its utility in the public estimation" and the inventor "is saved from mistakes, favoritism and prejudices of censors."[334]

By the late nineteenth century, these views were utterly triumphant.[335] Any previous pretensions of courts to replace the patent board as the discretionary arbiter of the public interest under the traditional privilege scheme were gone. Debates about utility in patent law were now limited to an ever-shrinking periphery of exploding machines[336] and gambling devices.[337] As far as ex-post review by the court was concerned, the two premises of Story's new orthodoxy were uniformly accepted: the role of courts was limited to applying general standard patentability criteria, and the sole arbiter and allocator of value was to be the market.[338]

D. The Coming of Modern Examination: 1836 and After

In 1836, after a protracted period of dissatisfaction with the patent regime and agitation for reform, another sea change occurred in the statutory framework. The Patent Act of 1836 created the first real examination system in the United States.[339] Unlike its predecessors, the Act specifically established the Patent Office as a sub division of the State Department and defined its structure and personnel.[340] The Patent Act also provided for "an examination of

332. PHILIPS, *supra* note 307, at 142; *see also* GEORGE TICKNOR CURTIS, THE LAW OF PATENTS FOR USEFUL INVENTIONS 37 (1954).

333. PHILIPS, *supra* note 307, at 142.

334. *Id.* at 20.

335. *See* Armstrong, *supra* note 301, at 93–96 (surveying the post-Civil War period).

336. *See* Mitchell v. Tilghman, 86 U.S. (19 Wall.) 287 (1874).

337. *See, e.g.*, Nat'l Automatic Device Co. v. Lloyd, 40 F. 89 (C.C.N.D. Ill. 1889). Another area in which utility remained a contested issue well into the twentieth century was pharmaceuticals, whose safety and efficacy were not yet clinically proven. *See* Armstrong, *supra* note 302, at 96.

338. *See* PHILIPS, *supra* note 307, at 128.

339. 1836 Patent Act, ch. 357, 5 Stat. 117.

340. *Id.*

the alleged new invention"[341] and mandated that "if the Commissioner shall deem it to be sufficiently useful and important, it shall be his duty to issue a patent."[342]

Despite the sufficiently useful and important language, the newly organized patent office was meant to be nothing like the old patent board. It was arranged not as a semi-political forum with discretionary powers to grant privileges, but rather as a bureaucracy whose role was to certify the satisfaction of standard patentability criteria.[343] Just as the 1790 regime was grounded in the mercantilist views of its time, the new framework cohered with the very different dominant Jacksonian outlook of the 1830s.[344] This outlook favored governmental encouragement of private enterprise, but its top villains were "special privileges" and the particularistic or unequal distribution of economic benefits.[345]

From this perspective, the patent law, like other laws designed to stimulate enterprise, had to be a general law that offered equal and universal opportunities to all citizens. The report of the Senate Committee, headed by John Ruggles, prepared the ground for the 1836 Act and conveyed exactly this message.[346] "Patronage," Ruggles wrote, "is necessarily partial in its operation."[347] The best way, he concluded, was "a general law to secure to all descriptions of persons, without discrimination, the exclusive use and sale, for a given period, of the thing invented."[348] *Scientific American*[349] magazine conveyed the same point in 1850, declaring "[w]e like impartiality, system and fair dealing in every respect .... We care

341. *Id.* at sec. 7, at 119–20.

342. *Id.*

343. *See* Robert C. Post, *"Liberalizers" Versus "Scientific Men" in the Antebellum Patent Office*, 17 TECH. & CULTURE 24 (1976).

344. *See* Steven Lubar, *The Transformation of Antebellum Patent Law*, 32 TECH. & CULTURE 932, 941–42 (1991).

345. About Jacksonian ideology, see RICHARD HOFSTADTER, THE AMERICAN POLITICAL TRADITION AND THE MEN WHO MADE IT 56 (1948); ARTHUR M. SCHLESINGER, THE AGE OF JACKSON 314–17 (1945).

346. RUGGLES, *supra* note 287, at 855.

347. *Id.*

348. *Id.*

349. When *Scientific American* started appearing in 1845, it was devoted to issues of technology and patents. Its proprietors became the owners of the Munn & Co. patent agency in 1846. ROBERT C. POST, PATENTS, AND POLITICS: A BIOGRAPHY OF CHARLES GRAFTON PAGE, 110–11, 125 (1976).

not who the applicant is, let him be Jew or Gentile," and demanding "uniform rules and regulations for *all cases* in the Office."[350] Two years later, when reacting to a reader's proposal to substitute patents with a state-prizes system, it announced:

> This system of committee caballing and maneuvering, to lighten the pockets of Uncle Sam, and to get special monopoly privileges we do detest. Give us broad just and workable laws, and let them be carried out faithfully—none of your special systems, where favors are sought for and obtained by particular parties in a particular manner.[351]

The 1836 committee report echoed another related idea that by that time already dominated the new line of utility court decisions.[352] A general law of patent rights was the best solution, it claimed, because "[t]here appears to be no better way of measuring out appropriate rewards."[353] In such a system inventors would "generally derive a just and appropriate encouragement proportioned to the value of their respective inventions."[354] Thus, disdain for special privileges accompanied the emerging market conception of value. General patent rights, it was argued, would insure that inventors would collect the "real" value of their inventions, that is to say whatever the market was willing to pay for them.[355]

In such an atmosphere, it is hardly surprising that the 1836 Act constituted a decisive move toward patent rights. The Act assigned the Patent Office the role of certifying universal patentability criteria and entitled individuals to a right to receive a patent whenever those criteria were met.[356] The last piece of the modern framework fell into place with a new right to appeal the examination decisions. As the committee report states, "the rights of the applicant will find ample protection in an appeal to a board of examiners."[357] The board of examiners, an ad hoc panel composed of "three disinterested persons" to which any rejection could be appealed,[358] was quickly

350. *Patent Office and Reform of the Patent Laws*, 5 SCI. AM. 317 (1850).
351. *Government Rewards for Discoveries*, 7 SCI. AM. 221 (1852).
352. *See supra* discussion accompanying notes 324–330.
353. RUGGLES, *supra* note 287, at 855.
354. *Id.*
355. *Id.* at 855–58.
356. 1836 Patent Act, ch. 357, 5 Stat. 117..
357. RUGGLES, *supra* note 287, at 861.
358. 1836 Patent Act, 5 Stat., at 120.

replaced by the judicial system. In 1839, Congress amended the Patent Act and replaced the board of examiners with the Chief Justice of the United States District Court for the District of Columbia.[359] The Act also provided a right of appeal to the federal courts, including from the decisions of the Chief Justice, in "all cases where patents [were] refused for any reason whatever."[360] The issuance of a patent based on uniform patentability criteria was now a right enforceable in the courts of law.

The practice of the Patent Office in the decades following the 1836 Act was characterized by cycles of "scientific men" who employed strict standards of patentability and "liberalizers" who slackened them and by public and political battles over these policies.[361] Those fights demonstrated that even in the new system of patent rights and "scientific" examination,[362] and even in the absence of "special privileges," the grant of patents remained a highly political issue. Yet under the new framework it was to be a politics of universalization, with the arguments—even those of specific interested parties—always aimed at the general standards of the system, rather than at specific patents. Occasionally, when the *Scientific American* was in a particularly combative mood, it would accuse the Patent Office examiners of being "each [] feudal Baron[s] of [their] own domain[s],"[363] but by this time the old discretionary privilege system was gone. Although there were differences regarding the standard, nobody would deny that the Patent Office's role as well as the courts', was to apply uniform patentability criteria in order to ascertain rights, rather than to weigh public benefits and grant discretionary privileges.

While other parts of patent law were still to undergo important changes, by the mid-nineteenth century the aspect of the institutional model of patents surveyed here acquired its modern form. A new ideology and practice of patents as individual rights and of the market as the only proper measure of the invention's value took over.

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359. Act in Addition to "An Act To Promote the Progress of the Useful Arts", ch. 88, sec. 11, 5 Stat. 353, 354–55.

360. *Id.* sec. 10.

361. *See* Post, *supra* note 343.

362. *See id.* at 28 (discussing the hopes of some for "objective scientific" criteria to decide patentability questions in the new system).

363. *Patent Office and Reform of the Patent Laws, supra* note 350, at 317.

The Patent Office became the "examiner" of standardized patentability criteria. Courts assumed the sole role of the enforcers of patent rights and deserted almost completely any pretensions that some of them had entertained earlier of engaging in substantive evaluations of the public desirability of specific inventions or patents. The conversion of patent privileges to patent rights was complete.

IV. WHY SHOULD WE CARE? SOME IMPLICATIONS

Since this essay is part of a symposium on the uses of the past in intellectual property, one might ask what the value is of the institutional history provided here. Is the story of the transformation of English patent privileges into the modern patent rights of any interest or use beyond the rather idiosyncratic curiosity of the collector of strange artifacts from the past? The answer is that the institutional history of patents may be useful to different degrees and in various ways, depending on the user's interests and purpose.

First, the history of Anglo-American patents should serve as a caveat to lawyers about the legitimate uses of history and historical materials. A popular style of argumentation among lawyers and courts consists of attempting to derive direct answers to contemporary positive and normative legal questions from the past. The structure of past legal arrangements, the "intentions" of their framers, and the practices of related institutions are all mobilized for this task. The story of the transformation of patents, however, demonstrates that this attempt is often futile and sometimes dangerous. What early legislators or bureaucrats thought about and did with respect to patents is often irrelevant for supplying direct answers to modern questions, given the fact that they operated under a thoroughly different ideological and practical context. Worse still, a particular view that made perfect sense in the world of patent privileges might prove to be of little coherence or adequacy in the very different context of patent rights. Hence, at least when attempting to derive direct answers to current legal questions, past attitudes and views are likely to be of limited utility.

Economic historians are much less preoccupied with questions of original intent and much more interested in issues of innovation. The debate around which most of the economic history of patents revolves is that of the historical connection between patents and

innovation.[364] More specifically, the debate is about the controversial claim that patents played a major role in the industrial revolution and in the later rapid economic and technological development in Europe and the United States.[365] The transformation of the institutional model of patents might prove a valuable piece in solving this puzzle. When one goes down to the details, it turns out that the term "patents" denotes very different sets of institutional arrangements in different periods. It is plausible that such different institutions had different effects on innovation. Thus, the fact that the institutional model of patents underwent a radical change during the nineteenth century becomes crucial to analyzing the question of whether, and how, patents facilitated technological innovation. Some of this institutional economics history of patents in the United States has already been written.[366] Yet to date, little attention has been given to the particular aspect of institutional change detailed here. It might prove beneficial to integrate the narrative of transformation from patent privileges to patent rights into the examination of the historical connection between patents and innovation.

Other historians would be most interested in broadening the scope of the inquiry to issues of context and causation. From this perspective, the story of institutional transformation detailed above would be put in its social context. Patents did not change from privileges into rights in a vacuum, or through a purely "internal"

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364. *See* B. Zorina Khan & Kenneth Sokoloff, *"Schemes of Practical Utility": Entrepreneurship and Innovation among "Great Inventors" During Early American Industrialization, 1790–1865*, 53 J. ECON. HIST. 289, 305 (1993) (concluding there was a correlation between patents and innovation contrary to the theory proposed by economic historians that early inventions were haphazard).

365. B. Zorina Khan, *Property Rights and Patent Litigation in Early Nineteenth-Century America*, 55 J. ECON. HIST. 58, 93 (1995) (stating that property rights in inventions that were property enforced promoted market exchange and technological progress).

366. The salient examples are the writings of Zorina Khan and Kenneth Sokoloff. *See, e.g.*, Khan & Sokoloff, *supra* note 365; Khan & Sokoloff, *The Democratization of Invention During Early Industrialization: Evidence from the United States*, 50 J. ECON. HIST. 363 (1990); Khan, *supra* note 366. Although these authors explore the role of changing patent institutions, they focus on what they call "the strengthening of the property right" and devote little attention to the transition from privileges to rights sketched here. Khan & Sokoloff, *supra* note 365, at 61.

process independent of other ideological, economic, political and technological changes. Such a contextual story however, does not necessarily have to be either a functionalist or a determinist one. The legal-institutional aspect upon which I have concentrated here should not be reduced to a mere "reflection," or to the "function" of other "real" social factors. In fact, the institutional story provided here gives reasons to assume neither that developments in the legal realm were always just reactive, nor that the borderline between legal and other (e.g., ideological) factors can always be easily detected. A good contextual story would describe a complex web of causation in which all factors, including the legal-institutional ones, were both active and reactive.

There is an important intersection between a broader contextual account of the transformation of patents, and the narrower economic history inquiry into the connection between the institutional model of patents and technological innovation. Institutional economics often neglects the social and cultural aspects of institutions.[367] Institutions, however, do not appear or function in the same general form in all societies. Rather, various societies develop different institutions, which are embedded in and mediated through their peculiar cultural patterns, ideologies and power struggles. Consequently, the economic narrative of the development and operation of patent rights can benefit from being interwoven into the broader contextual story of the history of patents.

I would like to end by exploring briefly yet another line of inquiry that stems from the institutional transformation of patents and the emergence of our modern framework of patent rights. I want to point out a few structural affinities between this modern ideological and institutional framework of patents that we have come to take for granted, and some of the fundamental attitudes and biases of our scholarly, political and legal thought on patents. James Boyle has recently suggested[368] that intellectual property scholarship is characterized by a radically narrow focus, or, as it were, by a voluntary blindness. Most legal scholarly work in the field of patents tends to restrict itself to a particular brand of utilitarian analysis,

367. *See* Acheson, *supra* note 10, at 25; Harris, *supra* note 10, at 340.

368. James Boyle, *Enclosing the Genome: What the Squabbles over Genetic Patents Could Teach Us*, *in* PERSPECTIVES ON PROPERTIES OF THE HUMAN GENOME PROJECT 97 (F. Scott Kieff ed., 2003).

which is focused on the extent to which particular rules maximize or inhibit technological innovation (narrowly defined). A multitude of other considerations and perspectives is being shut out as either irrelevant or as outside the purview of legitimate scholarship in the field.

Although this modern tendency may be most acute in legal academic scholarship, it is by no means restricted to it. Other fields of discourse, especially those that have the most immediate relevancy to the shaping of the actual norms and practices of the patent regime, show similar symptoms. The same tendencies toward an exclusive and monotonic focus on one peculiar utilitarian perspective and a narrow definition of innovation could be traced to, in various degrees, judicial opinions, practical legal arguments, the administrative practices of the PTO, legislative proceedings, and private as well as public reports and studies.

Moreover, in all of these fields of patent discourse, the voluntary blindness is typically accompanied by a few other related attitudes. First, there is the "dealt with elsewhere" approach. This is the often-asserted view that a variety of other considerations ranging from distributive justice to the ethical implications of certain patent doctrines may be important, but the function of the patent system is not to deal with them. Such other considerations, it is commonly argued, should be dealt with "elsewhere," which only too often ends up being nowhere. Second, there is the "one size fits all" approach.[369] Here, one finds a sort of imperialistic insistence that patents, or rather one static, particular model of patents, fits all contexts equally and should apply to "anything under the sun that is made by man."[370] The upshot of this approach is, in the words of the TRIPS agreement, no "discrimination as to . . . the field of technology."[371] Finally, there is a general tendency to ignore the political economy of patents. This refers to the various ways in which the political process and patent legal norms shape and are

369. *See* Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology Specific?*, 17 BERKELEY TECH. L.J. 1155, 1156 (2002).

370. S. REP. NO. 82-1979 (1952); H.R. REP. NO. 82-1923 (1952); *see also* Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980).

371. Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, *adopted* Dec. 15, 1993, pt. II, Annex 1C: Agreement on Trade Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods, Art. 27(1), 33 I.L.M. 81, 94.

shaped by one another, and produce and are produced by one another.[372]

All of these loosely connected tendencies bear close structural resemblance to the modern institutional and ideological model of patent rights. None of them is a logical necessity of this model. Nevertheless, the patent-rights framework seems especially conducive to these biases. The historical account provided here can shed some light on this connection. The traditional patent privileges were openly political. They were political decisions of the sovereign, exercising its discretion and making case-specific determinations in the name of the public good. The legitimacy of each patent grant was dependent on the plausibility and legitimacy of the governmental assertion attached to it that, taking all relevant considerations and interests into account, the grant served the public good.[373] Moreover, the "public good" in this context was not limited to a narrow conception of economic or technological innovation. Patent privileges existed in an age with no sharp distinction between "economic" (in the modern sense) and "other" public considerations.[374] Under the new patent-rights framework, however, patents lost this character. They became standardized general rights, legitimized by the claim of the universal patent regime to maximizing social utility.

The attitudes described above seem particularly apt to a culture that is immersed in the ideology and the practices of patent rights. When the character of patents as political governmental measures is obscured, it is easy to lose sight of their political dimension. When

372. As I argued elsewhere, what one usually finds in this context is a sort of schizophrenia: a dominant tendency to ignore the political aspect of intellectual property rights, which is occasionally replaced by the opposite extreme of reducing all such rights to the interplay of interest group politics. *See* Oren Bracha, *Who Killed Politics? Past and Present Perspectives on the Political Sphere of Intellectual Property*, *in* THE RULE OF LAW AND NEW COMMUNICATION TECHNOLOGY (forthcoming 2005).

373. Again, the first analogy that comes to mind of this basis for legitimacy and its transformation in the mid-nineteenth century is corporate charters. *See* JAMES WILLARD, THE LEGITIMACY OF THE BUSINESS CORPORATION IN THE LAW OF THE UNITED STATES, 1780–1970 (1978).

374. *See* WILLIAM NOVAK, PEOPLE'S WELFARE: LAW AND REGULATION IN NINETEENTH-CENTURY AMERICA 86–88 (1996) (the traditional meaning of the term "economy" encompassing "any society ordered after the manner of a family . . . with a view to orderly conduct and productiveness").

they are universalized and justified on the basis of the utility of the general regime, it is only natural to restrict one's perspective to narrowly defined utilitarianism of innovation, argue that all other concerns should be dealt with elsewhere, and have an innate hostility to any attempt at particularization.

I hope it is clear that the above is not an argument for a return to the 1790 patent board or to individual legislative patent grants. It is rather an argument about some of the side effects of the particular institutional model of patents with which we ended up, and about the sorts of ideological biases this model is prone to create. Here is, then, one final possible use of the past in intellectual property. The historical narrative of the transformation of patents from privileges into rights may serve to remind us of those aspects of patents that were obscured and repressed in our modern consciousness.